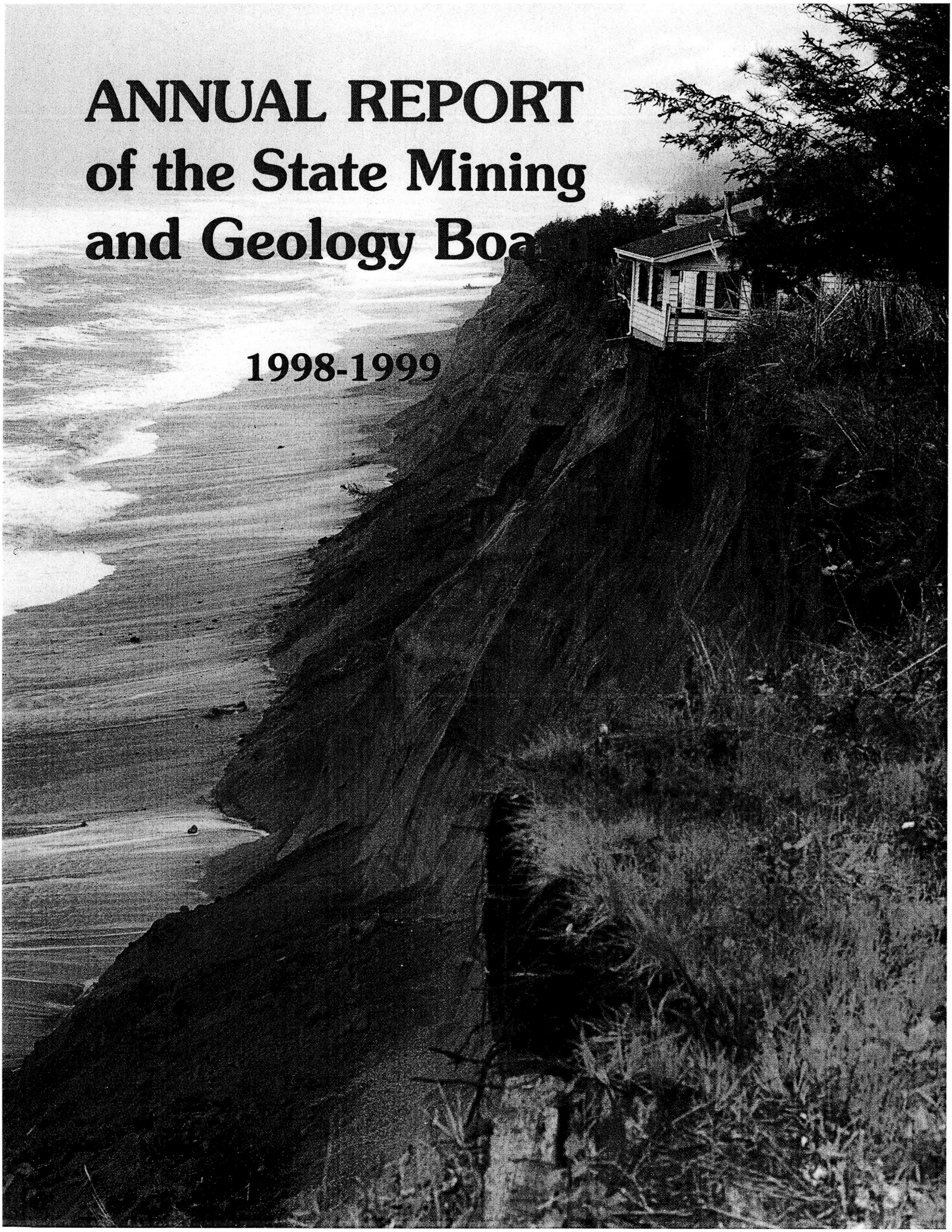

ANNUAL REPORT of the State Mining and Geology Boa

1998-1999

Gray Davis
Governor
State of California

Mary Nichols
Secretary
Resources Agency

Darryl Young
Director
Department of Conservation

Cover Photo. Looking north, near Big Lagoon, Humboldt County. 80,000 year old marine deposits are exposed in cliff face. During one storm event, this location experienced about 50 feet of cliff erosion, which undermined part of this house. *Photo by Jim Falls, DMG.*

ANNUAL REPORT
of the
STATE MINING AND GEOLOGY BOARD

1998-1999

CURRENT BOARD MEMBERS

Robert E. Grunwald, Chairman
Charles Buckley
Sands Figuers, Ph.D.
Robert Munro
Richard Ramirez

FORMER BOARD MEMBERS

James Lee
Benjamin Licari
Julie Mann
Sheila Murphy
Lee Thibadeau

EXECUTIVE OFFICER

John G. Parrish, Ph.D.

EXECUTIVE ASSISTANT

Kit Gonzales

State Mining and Geology Board
801 K Street, MS 24-05
Sacramento, California 95814

PHOTO: Stonewall Mine c.1900.
For a short period in 1898, tailings left from prior mining operations were processed to recover gold not previously recovered. Tailings were scooped up with scrapers attached to horses and transported to the mill in background. From Union Title Insurance and Trust Company. DMG photo file #C-8075.

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April 5th 1894

Regular Meeting of the Board of Trustees
Present
J. Z. Davis President
W. S. Keyes Vice "
W. S. Lyle
The following accounts for March 1894 were audited and Vouchers therefor signed by the Trustees present.

1709	Salaries Bur. Employes March	500		
1710	General Expenses " "	9880		
1713	Rent " Apric	250	848	80
	Bureau Appropriation			
1711	Sals Geological Assistants Mch	510		
1712	Trav. Expenses " " "	227 40	737	40
	Glol. Appropriation			
	Total due from Sac to		1586	20

1709 / 1711 $1010 Pd Apl 10th

1713 / 1710 348 80 Pd Apl 20th

1712 227.40 Pd May 1st

ANNUAL REPORT
of the
STATE MINING AND GEOLOGY BOARD
1998-1999

OVERVIEW

The *Annual Report of the State Mining and Geology Board* is prepared for both the State Legislature and the Governor, and is provided for in statute [ref. PRC § 674 and § 2717].

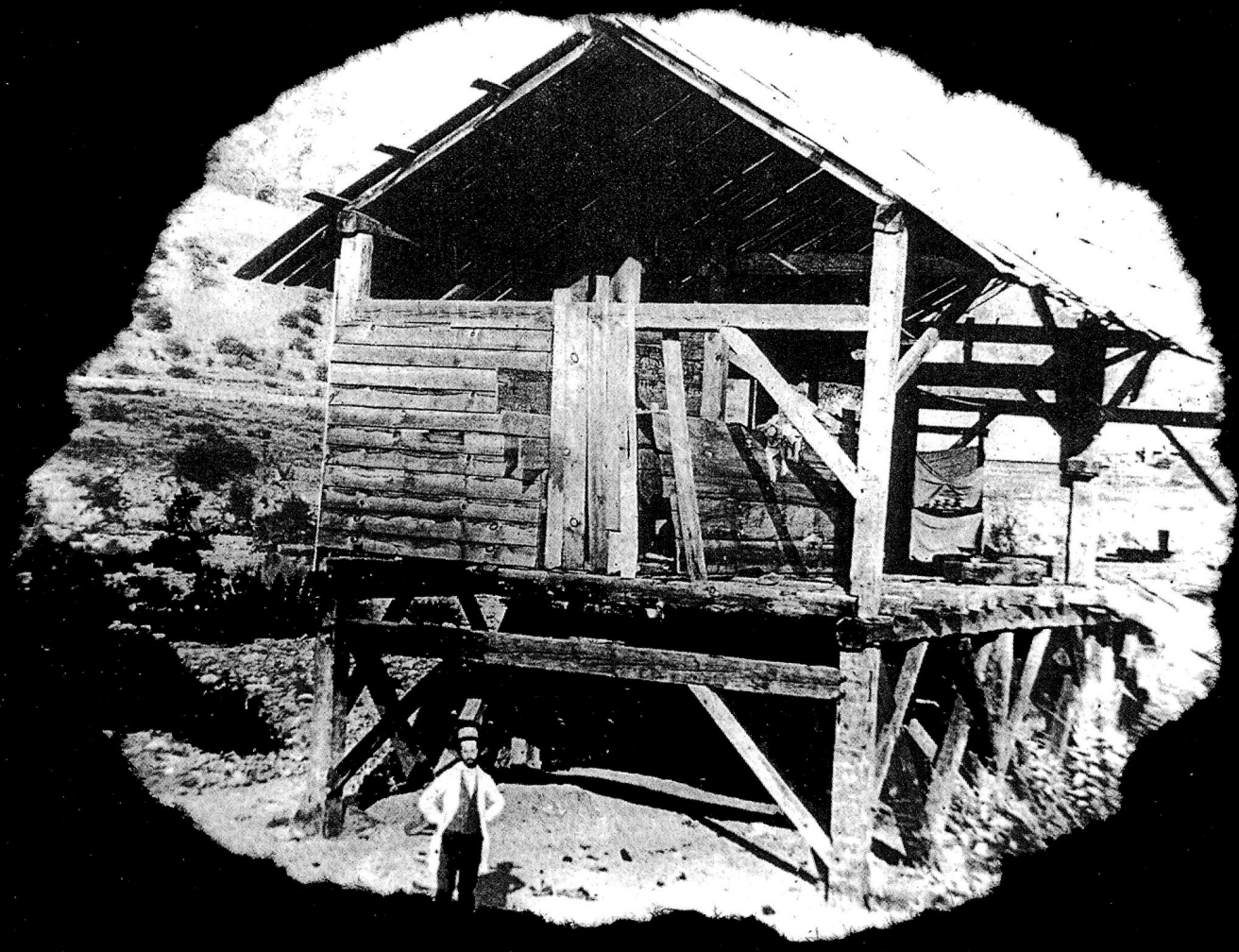
The last time the Annual Report was prepared was for the 1990-1991 Fiscal Year. Since that time, the publication of the Annual Report—and the annual reports of many other state agencies—was suspended by legislative actions taken in response to statewide budgetary concerns. This is the first SMGB Annual Report published since the 1990-1991 Annual Report, and the scope of this Annual Report has been expanded significantly to encompass events and progress made over the past seven years.

In 1990-1991, major amendments were made to the Surface Mining and Reclamation Act of 1975 that were just beginning to be implemented throughout the state. Since then and as a result of these amendments, statewide reclamation standards for surface mines have been adopted by the SMGB, annual reporting requirements commenced, cities, counties, surface mine operators, the Department of Conservation and the SMGB assumed new roles and undertook new responsibilities. In addition, enforcement programs were developed and initiated by the Department of Conservation, lead agency ordinances were revised and re-certified by the SMGB, and SMARA itself was amended nine times by the Legislature beginning in 1992.

In 1973 the Alquist-Priolo Earthquake Fault Zoning Act become effective, and by 1990 a total of 486 maps had been produced across the state depicting zones in which active earthquake faults could be traced on the land's surface. Since 1990-1991, an additional 58 new maps have been produced, and 32 existing maps have been revised where new information was received.

With the passage of the Seismic Hazards Mapping Act (AB 3897, Brown) in 1990, the Department of Conservation's Division of Mines and Geology and the SMGB acquired new responsibilities in developing policies and a program for mapping areas of the state subject to geologic hazards caused by seismic activities. Since 1990-1991 the SMGB has developed, in cooperation with the Division of Mines and Geology, both regulations and technical guidelines relating to the mapping of seismic hazards in the state. As of June 30, 1999, 40 Official Seismic Hazard Zone maps have been prepared and released by the Division. Others are in production and will continue to be released upon their completion.

One program sanctioned under the Landslide Hazard Identification Act terminated at the end of 1994 with the expiration of the Act on January 1, 1995. Although the Division of Mines and Geology annually expends considerable time and effort during emergency situations investigating landslides triggered by saturated ground following periods of heavy rainfall, much of the requirements of this Act have been absorbed by the mapping accomplished under the Seismic Hazards Mapping Act.



Historical photo of Sutter's Mill.

ANNUAL REPORT
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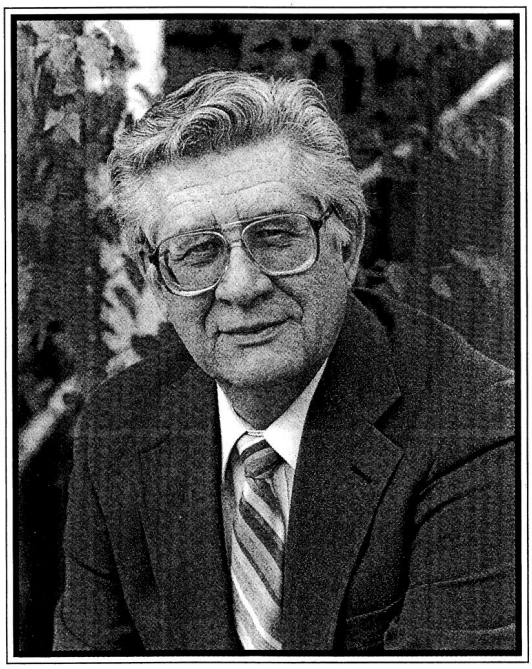
1998-1999

CHAIRMAN'S COMMENTS

The 1998-1999 Edition of the *Annual Report of the State Mining and Geology Board* (SMGB) is the first published Annual Report from the Board in seven years. As noted in the previous Overview section, a statewide moratorium on the publication of these types of annual reports was in effect between 1992 and 1999. This Report breaks from the traditional "Annual" Report in that it attempts to summarize the activities, events, and achievements of the past several years (since 1990-1991), while still providing information on the current status of the state's dynamic geology and abundant mineral resources. It, also, provides some recommendations where the Board believes improvements can be made for the future well being of the state's people and its natural resources.



Robert E. Grunwald, *Chairman*

As you review the information in this Report, you will see that the SMGB, the Department of Conservation, and the Division of Mines and Geology have been fully engaged over the past seven years implementing the mandates of the Alquist-Priolo Earthquake Fault Zoning Act, the Seismic Hazards Mapping Act, and the Surface Mining and Reclamation Act of 1975. In the Spring of 1999 the Board lost its quorum because of expiring terms of five of its members. Nevertheless, the Board continued to carry on its business at the committee level until the re-establishment of a quorum in November.

The State Mining and Geology Board has a long history of service to the people of California, and we, its current members, look forward with enthusiasm to continuing to serve our state with professionalism and dedication in the 21st Century, just as our predecessors on the Board endeavored to do in the 19th and 20th Centuries.

ANNUAL REPORT
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STATE MINING AND GEOLOGY BOARD
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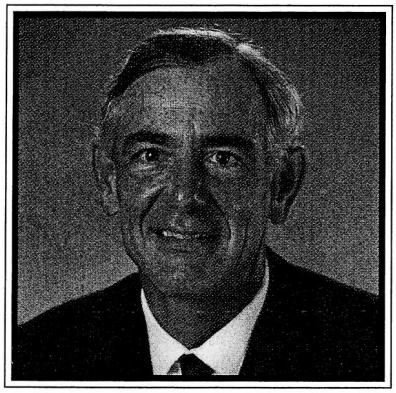
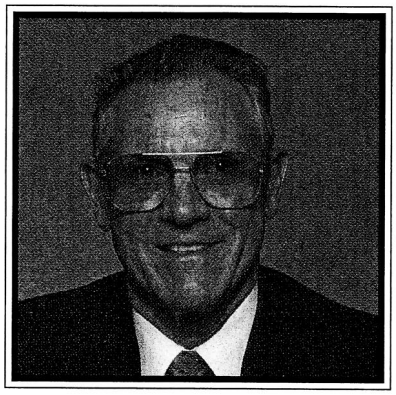
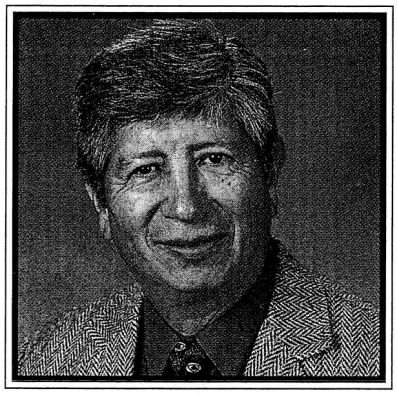
MEMBERS OF THE BOARD



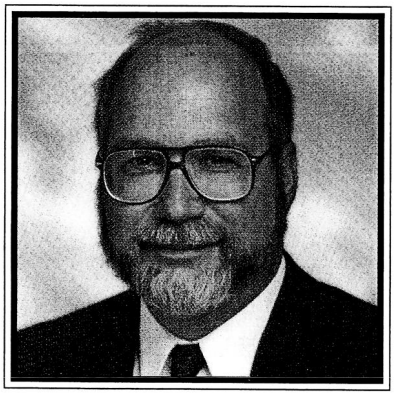
Charles Buckley



Robert Munro



Richard Ramirez



Sands Figuers, Ph.D.

FORMER 1998-1999 BOARD MEMBERS

James Lee
Benjamin Licari
Julie Mann
Sheila Murphy
Lee Thibadeau

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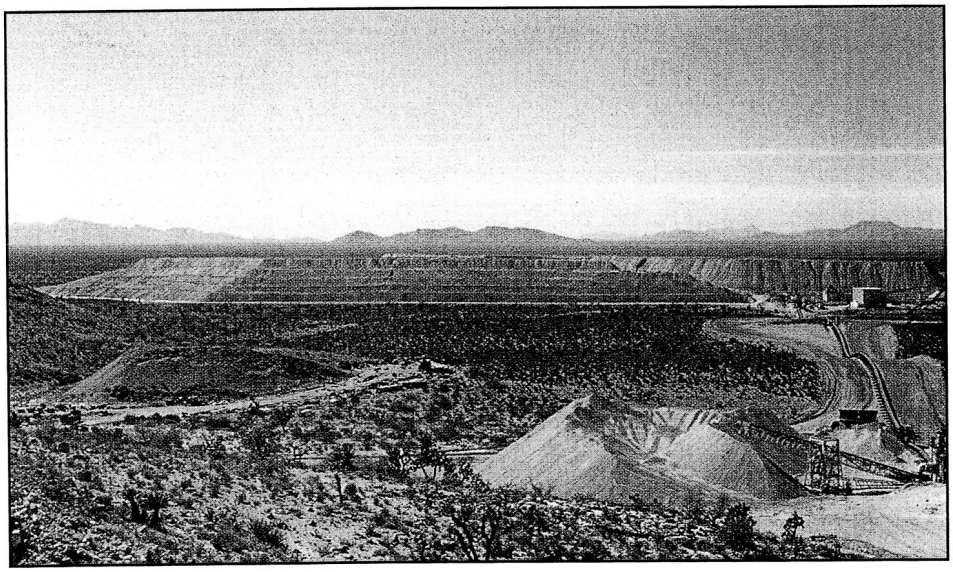
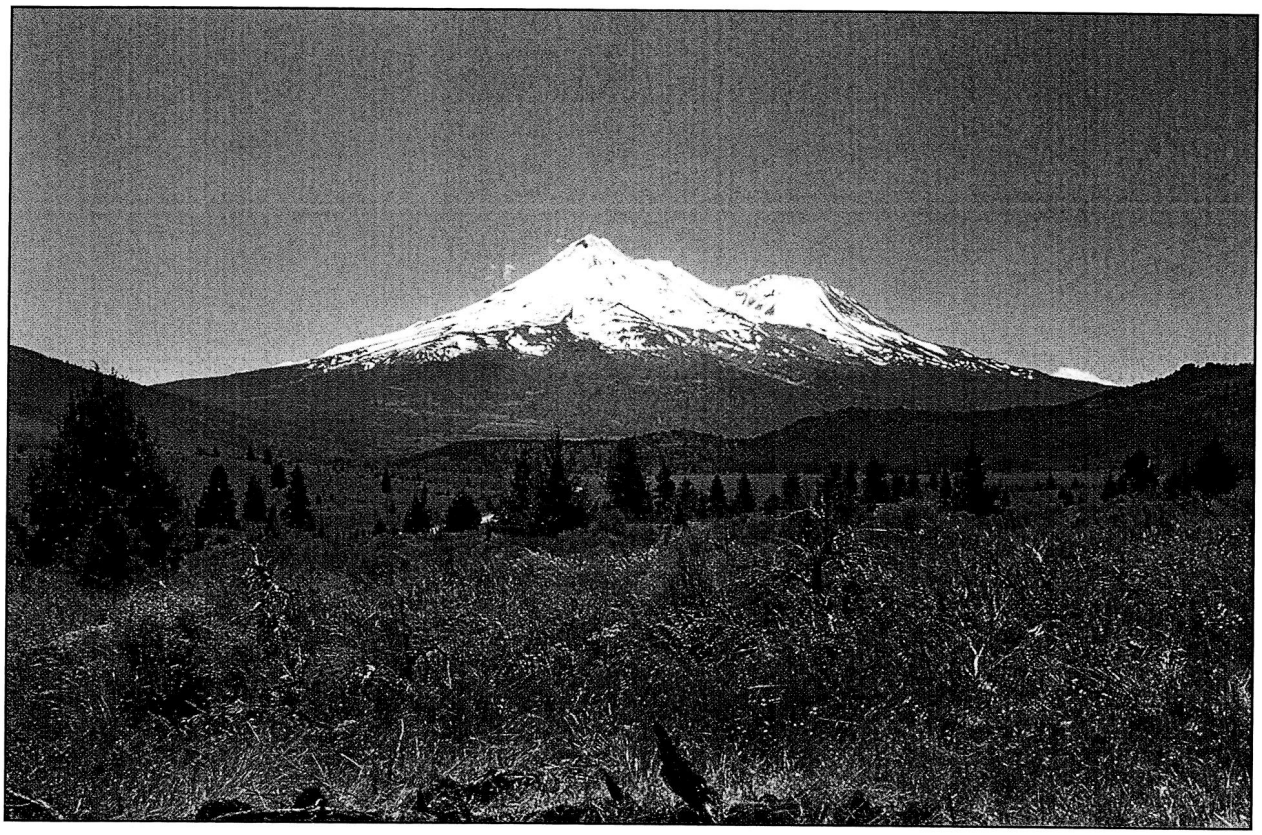
PAST MEMBERS OF THE BOARD SINCE 1990-1991

James Anderson, Chairman
George Brogan
Al Franks, Ph.D.
DeWayne Holmdahl, Chairman
I.M. (Ed) Idriss
Anna Johs
Ray Krauss
Jack Lucas
R. Gary Miller
Jack Streblow



Castle Mountain Mine, San Bernardino County. View is toward the west and shows the leach pads and plant operations. *Photo by Dinah Shumway, 1996.*



Looking south at Mount Shasta. *Photo by Max Flanery.*

ANNUAL REPORT
of the
STATE MINING AND GEOLOGY BOARD
1998-1999

INTRODUCTION

ORGANIZATION AND RESPONSIBILITIES OF THE BOARD

The State Mining and Geology Board (SMGB) was established in 1885 as the Board of Trustees. Its purpose was to oversee the activities of the State Mineralogist and the Bureau of Mines (now the Division of Mines and Geology, the state's geological survey), which were created by the Legislature five years earlier. The general policy for the Division is established by the SMGB. The Board's responsibilities recognize the impacts that California's complex geology, large amounts of federally managed lands, high mineralization, and potential for geologic hazards have on the state's economy, land use, and public safety.

Today's SMGB is composed of nine members appointed by the Governor, and confirmed by the Senate, for four-year terms. By statute, SMGB members must possess specified professional backgrounds in geology, mining engineering, environmental protection, groundwater hydrology and rock chemistry, urban planning, landscape architecture, mineral resource conservation, and seismology. There must also be one public member.

To enable the SMGB to meet its responsibilities most effectively, it has established nine standing committees to gather information and formulate recommendations on a variety of topics. These committees include the Financial Assurances Committee, the Geohazards Committee, the Interboard Coordinating Committee, the Legislation and Regulation Committee, the Mineral Conservation Committee, the Mine Reclamation Standards Committee, the Policy Committee, and the Public Information and Education Committee. The full SMGB, and these committees, meet in regularly scheduled sessions each month.

The SMGB has one active advisory group which is the Seismic Hazards Mapping Act Advisory Committee (SHMAAC). This subcommittee reports to the SMGB's Geohazards Committee, and is involved with the production and modifications to the *Guidelines for Evaluating and Mitigating Seismic Hazards in California*. The subcommittee is composed of ten professional members with various scientific, engineering, governmental, and business specialties. The subcommittee members are part time, and are not paid for their services.

The SMGB operates within the Department of Conservation, and is granted certain autonomous responsibilities and obligations under several statutes. The SMGB's general authority is granted under the Public Resources Code (PRC) Sections 660-678. Specifically, PRC Section 662(b) requires all SMGB members to "represent the general public's interest." The SMGB serves as a regulatory, policy, and appeals body representing the state's interests in geology, geologic and seismologic hazards, conservation of mineral resources and reclamation of lands following surface mining activities.

MISSION STATEMENT

"The mission of the State Mining and Geology Board is to represent the State's interest in the development, utilization and conservation of mineral resources; reclamation of mined lands; development of geologic and seismic hazard information; and to provide a forum for public redress."

ALQUIST-PRIOLO EARTHQUAKE FAULT ZONING ACT

Under this Act, the SMGB is authorized to represent the state's interests in establishing professional guidelines and standards for geological and geophysical investigations and reports produced by the Division of Mines and Geology, public sector agencies, and private practitioners. The SMGB, also, is authorized to develop specific criteria through regulations that shall be used by affected lead agencies in complying with the provisions of the Act so as to protect the health, safety and welfare of the public.

This Act (Public Resources Code, Chapter 7.5, Section 2621 through Section 2630) is intended to provide policies and criteria to assist cities, counties and state agencies in the exercise of their responsibilities to prohibit the location of developments and structures for human occupancy across the trace of active faults as defined by the SMGB. Further, it is the intent of this Act to provide the citizens of the state with increased safety and to minimize the loss of life during and immediately following earthquakes. The Act will facilitate seismic retrofitting to strengthen buildings against ground shaking, including historical buildings.

Principal populations served:

- City, county and state agencies having jurisdictions over zoning ordinances, building codes, and general plan developments;
- Land developers and contractors;
- Division of Mines and Geology;
- Professional geological, geophysical, and engineering consulting community.

SEISMIC HAZARDS MAPPING ACT

Under this Act, the SMGB is authorized to provide policy and guidance through regulations for a statewide seismic hazard mapping and technical advisory program to assist cities, counties, and state agencies in fulfilling their responsibilities for protecting the public health and safety from the effects of strong ground shaking, liquefaction, or other ground failure, landslides and other seismic hazards caused by earthquakes, including tsunami and seiche threats.

The Seismic Hazards Mapping Act (Public Resources Code Chapter 7.8, Section 2690 through Section 2699.6) establishes the authority to provide programs to identify and map seismic hazard zones in the state in order for cities and counties to adequately prepare the safety element of their general plans, and to encourage land use management policies and regulations that reduce and mitigate those hazards so as to protect public health and safety.

Principal populations served:

- City, county and state agencies having jurisdictions over zoning ordinances, building codes, and general plan developments;
- Land developers and contractors;
- Division of Mines and Geology;
- Professional geological, geophysical, and engineering consulting community.

SURFACE MINING AND RECLAMATION ACT OF 1975

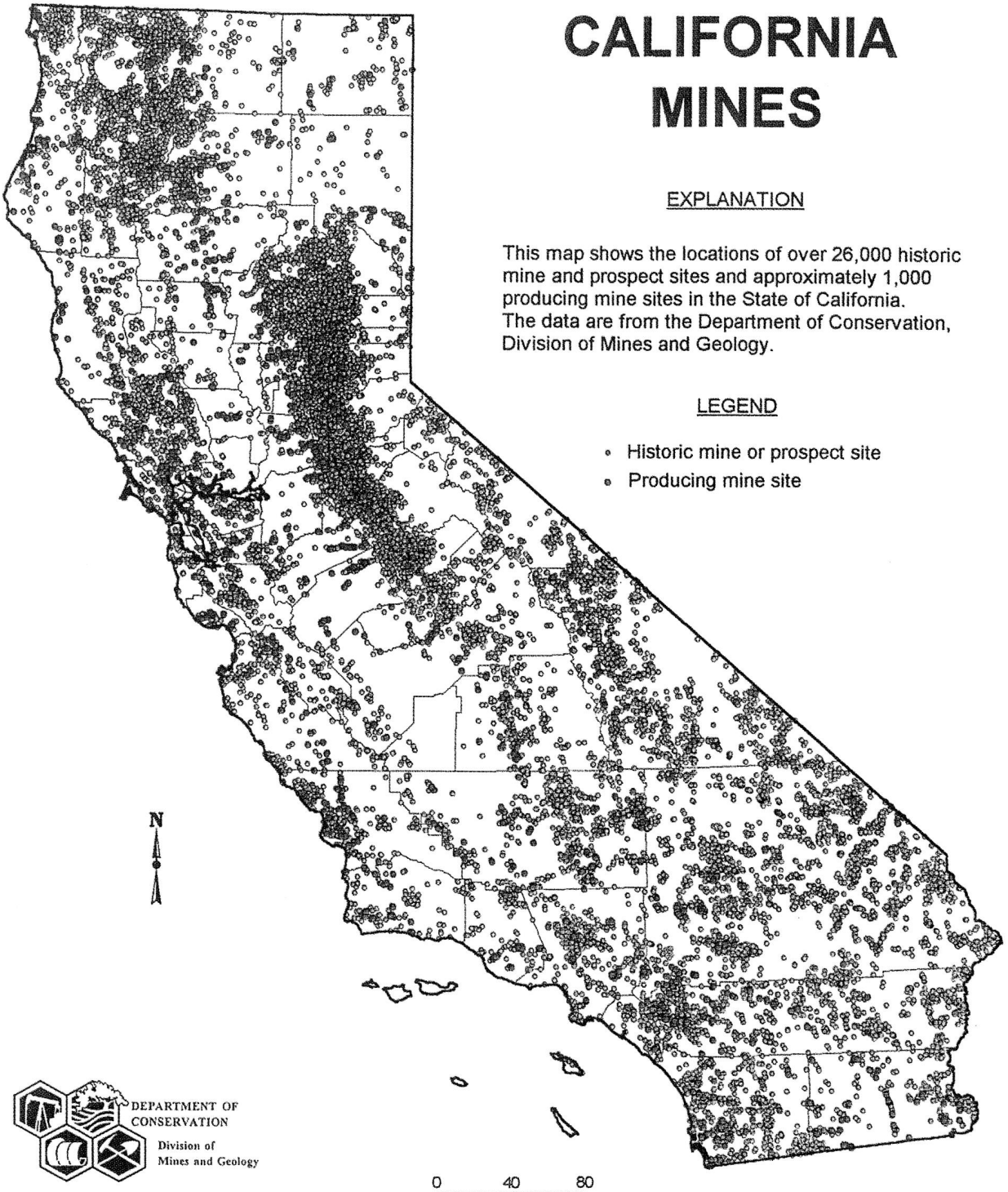
The extraction of minerals in a responsible manner is essential to the continued economic well-being of the state and to the needs of society. The thoughtful reclamation of mined lands is necessary to prevent or minimize adverse effects on the environment and to protect the public health and safety.

Under these statutes, the SMGB is authorized to represent the state's interests in the development, utilization, and conservation of the state's mineral resources, the reclamation of mined lands, and federal matters pertaining to surface mining within the state.

Principal populations served:

- 129 "Lead Agencies" (counties and cities), with authority over surface mining operations within their jurisdictions;
- Over 1,300 reporting surface mining operations within the state;
- Department of Conservation's Office of Mine Reclamation;
- Department of Conservation's Division of Mines and Geology.

Heavy mining equipment in operation at the U.S. Borax Incorporated Boron Pit, in the Mojave Desert. The mine is the world's largest borate minerals producer, which are used in the manufacturing of glass, fiberglass, detergents, fire retardants, and many other products. Mineral land classification studies conducted by the Division of Mines and Geology help ensure the continued availability of these and other minerals important to our society. *Photo by Dave Beeby.*



CALIFORNIA MINES

EXPLANATION

This map shows the locations of over 26,000 historic mine and prospect sites and approximately 1,000 producing mine sites in the State of California. The data are from the Department of Conservation, Division of Mines and Geology.

LEGEND

- Historic mine or prospect site
- Producing mine site

N

DEPARTMENT OF CONSERVATION
Division of Mines and Geology

0 40 80
Miles

DECEMBER 1996

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MAJOR ACTIONS PURSUANT TO THE SURFACE MINING AND RECLAMATION ACT OF 1975

The Surface Mining and Reclamation Act of 1975 (SMARA, Public Resources Code Sections 2710-2796) provides a comprehensive surface mining and reclamation policy with the regulation of surface mining operations to assure that adverse environmental impacts are minimized and mined lands are reclaimed to a usable condition. SMARA, also, encourages the production, conservation, and protection of the state's mineral resources. (Public Resources Section 2207 provides for the annual reporting requirements of this statute, under which the Board also is granted authority and obligations).

Principal populations served:

- 129 "Lead Agencies" (counties and cities), with authority over surface mining operations within their jurisdictions;
- Over 1,300 reporting surface mining operations within the State;
- Department of Conservation's Office of Mine Reclamation;
- Department of Conservation's Division of Mines and Geology.

SCOPE OF SMARA AUTHORITY

The Surface Mining and Reclamation Act of 1975 (SMARA, or the Act) provides for a three-tiered approach for its administration and enforcement.

The primary entity responsible for the Act's enforcement is the local "lead agency"—that is, the city or county in which a surface mine operates. The lead agency is responsible for seeing that all surface mine operations within its jurisdiction are in full compliance with the Act. SMARA prescribes specific responsibilities and powers to the lead agency.

When the lead agency is incapable of, or fails to bring a surface mine operation into compliance with the Act, SMARA provides that the Director of the Department of Conservation (Director, DOC) enforce the Act and bring the surface mine operation into compliance. SMARA prescribes specific responsibilities and powers to the Director. The Department of Conservation, also, is responsible for providing technical reviews to lead agencies of reclamation plans and financial assurances to ensure that the requirements of SMARA have been addressed in the reclamation plans prior to their formal approval by the lead agency.

The third tier of enforcement lies with the State Mining and Geology Board (SMGB). Under the Act, the SMGB is provided authority to hear appeals of enforcement actions taken by the Director against surface mine operators, and appeals of certain decisions regarding reclamation plans and financial assurances taken by a lead agency. In addition, the SMGB is provided authority to take over a lead agency's SMARA authority when the lead agency is in violation of the Act or defaults on its responsibilities. The SMGB may also exempt specific surface mining operations from the Act's requirements.

Regulations that clarify and make specific SMARA's statutes also lie within the SMGB's

authority. These regulations include Performance Standards for the reclamation of lands disturbed by surface mining, and types of Financial Assurance instruments that are acceptable to ensure reclamation.

The core services and activities of the SMGB are:

- Establish mining and reclamation standards and policies and provide guidance and direction to lead agencies, mine operators, the Division of Mines and Geology, the Office of Mine Reclamation, and other agencies and organizations (Federal, state, local);
- Represent the interests of the state in SMARA matters that are appealed to the Board for action;
- Develop regulations to implement the statutes statewide so as to ensure an even-handed application of the law throughout an environmentally and economically diverse state;
- Minimize residual hazards to the public health and safety from surface mining operations;
- Encourage the production and conservation of the state's mineral resources, while providing standards for the protection and preservation of the State's recreation, watershed, wildlife, range and forage, and aesthetic features.
- Certify lead agency surface mining ordinances as being in accordance with the requirements of SMARA.

CHANGES TO SMARA SINCE 1990-1991 FISCAL YEAR

SMARA became effective on January 1, 1976. Since that time it has been amended by the Legislature 17 times. Some significant changes to the Act occurred in 1987 (AB 747, Sher), in 1990 (AB 3551, 3903, Sher), and 1991 (AB 1506, Sher), when additional performance standards for mine reclamation were required; financial assurances guaranteeing reclamation were made mandatory; surface mines without approved reclamation plans were given deadlines to comply or else close until compliance was achieved; annual inspections of mines by the lead agency were required; and annual mining reports and fees from mine operators were established to support the SMARA program within the DOC.

Also, in 1992, AB 3098 (Sher) changed the Public Contract Code (§ 10295.5) to require state agencies to purchase mineral products from only those surface mines that possessed lead agency approved reclamation plans and financial assurances.

Memorandum of Understanding Between the U. S. Forest Service, the Bureau of Land Management, and the State of California

In 1977, the Attorney General's Office advised the SMGB that, barring actual conflicts with federal interests, the SMGB could regulate private mining activities on federal lands. In the case *California Coastal Commission et al. v. Granite Rock Company* (March, 1987) the U.S. Supreme Court determined that there was no inherent preemption of state regulation of private activities on federal lands, and no assumption that the application of state law conflicts with federal interests. It was further recognized that the U.S. Forest Service regulations for Plans of Operations do not preempt state regulation because the regulations themselves contemplate and recognize state regulations. Although not articulated in this case, this is also true of the BLM's regulations.

On October 19, 1992 the U. S. Forest Service, the Bureau of Land Management, the Department of Conservation, and the SMGB entered into a Memorandum of Understanding (MOU) for the purposes of:

(1) assuring the application of adequate and appropriate reclamation throughout the state of California;

(2) simplifying the administration of surface mining and reclamation practice requirements on

Federal lands and on a combination of Federal and private lands;

(3) achieving coordination of activity governing reclamation; and,

(4) eliminating duplication among the aforementioned agencies and counties serving as lead agencies (as defined in SMARA) in implementing state and federal requirements.

This MOU provides the framework required by local government entities, operators, and interested parties to enable full compliance with the letter and spirit of environmental protection laws for surface mining operations in California.

ANNUAL MINE REPORTING

Public Resources Code § 2207 (AB 3551, 3903 [1990, Sher]; AB 1506 [1991, Sher]) provides requirements for filing annual reports and reporting fees by each surface mine. These Annual Reports are filed on forms furnished by the SMGB. Annual Reporting Fees and a method for collecting those annual fees from each active surface mining operation, also, are imposed by the SMGB. By July 1, 1991 surface mine operators were required to file an annual report and pay fees to the DOC for operations conducted during the 1990 calendar year. The following table reflects the number of reporting mines per year since 1990. Since Annual Reports are filed with the Department of Conservation by July 1st for the previous calendar year, the number of reporting mines is not presently available for the 1998 calendar year.

The Department of Conservation's Office of Mine Reclamation's Compliance Unit is responsible for the review and processing of annual reports and mining fees. In July, 1998 this unit processed 1,326 annual reports filed for the 1997 calendar year. In addition, mine fees amounting to about $1 million were collected to run the DOC's SMARA program.

ENFORCEMENT HISTORY OF LEAD AGENCIES AND THE DEPARTMENT OF CONSERVATION

By July 1, 1991 surface mine operators were required to file an annual report and fees with the DOC for operations conducted during calendar year 1990. This was the first year annual filing and reporting were required, and 856 mines responded. In September, and again in October, the Department issued its first and second series of deficiency letters to errant surface mine operators for failure to report and/or pay fees. Between November 1991 and January 1992, the Department issued its first 14 Administrative Penalties against operators who did not file or send in prescribed reporting fees.

"Good Faith" Program starts: "Good Faith" commenced in March 1992 when the DOC rescinded all previously issued Administrative Pen-

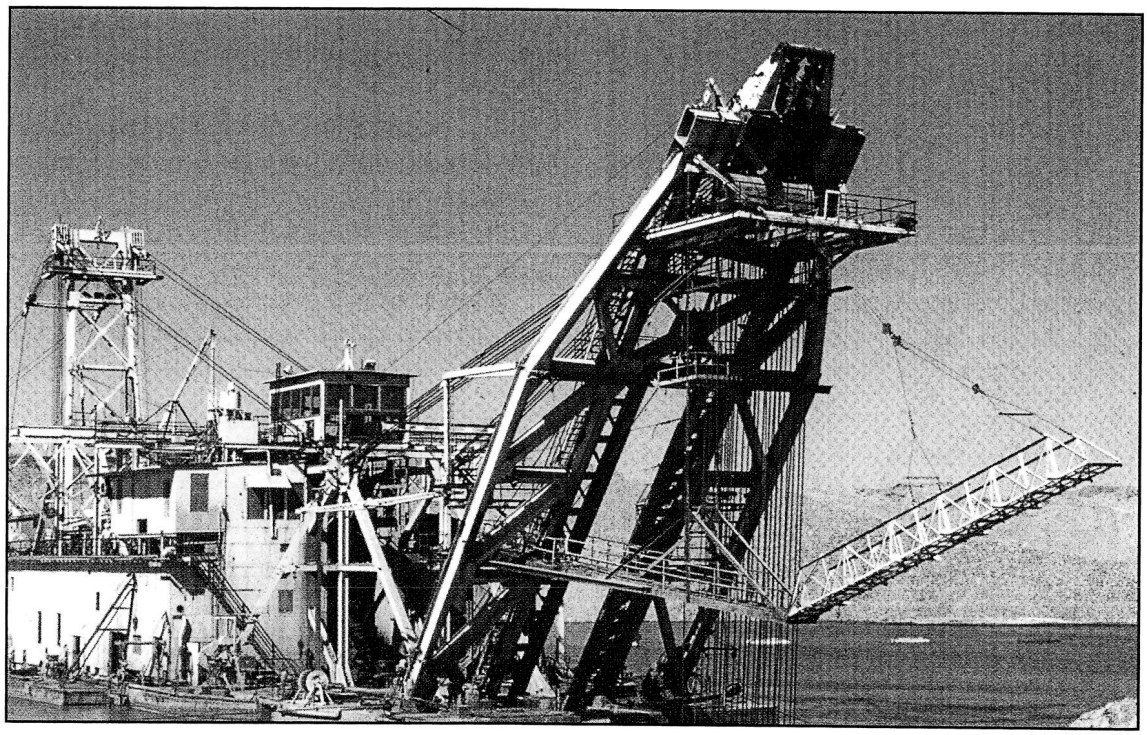
Reporting Year	Number of Mines	Mines on 3098 List
1990	856	NA*
1991	1079	NA*
1992	1154	NA* (414)
1993	1185	702
1994	1274	773
1995	1290	825
1996	1332	902
1997	1326	1042
1998	not available	1152

* The AB 3098 List was mandated by the Statutes of 1992, which made the effective date for the use of the "List" July 1, 1993; on that effective date, only 414 mines were eligible for the first List containing 1,154 mines that reported on July 1st for the 1992 Calendar Year.

alties. These penalties were for failure of the operator to file an annual report, pay the correct fees, and/or have a lead agency approved Reclamation Plan. (Financial Assurances, although required, were not mandated to be in place until January 1, 1994).

The "Good Faith" Program was instituted to give those operators and their lead agencies time to complete the new, and sometimes lengthy, compliance process. The basic concept of the Program was that so long as the operator was working on schedule toward full compliance, according to a lead agency approved time table, the DOC would not issue an Administrative Penalty against the operator. The only condition was that forward progress be made in a forthright manner according to the agreed upon timetable.

In August 1996, four years after its inception, the Director of the Department of Conservation announced that "Good Faith" had run its course. Those who were on "Good Faith" needed to complete the compliance process quickly — those who were not could no longer ask for or expect "Good Faith" from the DOC. The DOC's position was that if a lead agency, which had the primary responsibility for enforcing SMARA, was not able to get a mine into compliance after four years, then either the operator needed to 1) appeal the inaction of the lead agency to the SMGB and/or the DOC needed to report the lead agency to the SMGB, or 2) the lead agency needed to enforce SMARA and shut down the operation until it became compliant. The DOC believed that it was not fair to those operators who came into compliance earlier on their own or under "Good Faith" to allow other



Stream gravels are mined along the Yuba River by large dredges. Dredge 21 operated about 50 miles north of Sacramento by Cal Sierra Development, Inc. *Photo by Ron Churchiill, 1992.*

operators a competitive advantage of not meeting the same compliance requirements.

DEPARTMENT OF CONSERVATION/ OFFICE OF MINE RECLAMATION

In 1991 the DOC created the Office of Mine Reclamation (OMR) to administer the provisions of SMARA. The core operations of OMR are to:

Item 1—provide expert technical review and comment on reclamation plans and plan amendments submitted by lead agencies prior to the granting of permission to conduct mining operations;

Item 2—review and comment on financial assurance estimates for reclamation plan and plan amendments;

Item 3—assist lead agencies by providing training and advice on administering and enforcing the Act;

Item 4—assist and advise surface mine operators regarding SMARA compliance issues;

Item 5—review and process annual reports and fees supporting the SMARA program;

Item 6—recommend state enforcement actions to the Director against surface mine operators not in compliance with the Act.

Items 1, 2, and 4—OMR has a technical staff in its Mine Reclamation Unit that reviews reclamation plans and plan amendment submittals from lead agencies. This unit also assists individual mine operators with reclamation questions, and conducts on-site inspections of new surface mine sites and of existing sites.

Item 3—OMR's Reclamation Unit conducts training workshops throughout the state for lead agency personnel regarding the content of SMARA and the SMGB's reclamation regulations. During 1997 and early 1998, OMR conducted a dozen Mined Land Reclamation Workshops statewide. In mid-1998, the Office held its first Annual Inspection Workshop for lead agencies. These workshops received universal praise from lead agency personnel and from the SMGB.

Items 5 and 6—OMR's Compliance Unit is responsible for the review and processing of annual reports and mining fees. In July, 1998 this unit processed 1,326 annual reports. In addition, mine fees amounting to about $1 million were collected to run the SMARA program. When surface mine operators fail to provide reports, fees, reclamation plans and financial assurances as required by SMARA (and Public Resource Code § 2207), the Compliance Unit notifies the operator and the responsible lead agency of the operator's lack of compliance. A request is then made of the local jurisdiction to take corrective action. If the operator fails to comply, and the lead agency takes no further action, the Compliance Unit recommends enforcement action to the Director.

Between July 1, 1991 and June 30, 1999, OMR (through the Director) has issued 199 Administrative Penalties against operators. In order to collect on some of these penalties, the DOC has filed in Small Claims Court five times, and sent 23 unpaid penalties to the Attorney General's Office for action.

In 1997 the Director issued three Closure Orders against non-compliant surface mine operations in El Dorado County. These were the first Orders to Comply or Cease Operations issued by a Director since the enactment of SMARA. The County had not been successful in bringing these three sites into compliance, but had allowed each mine to continue to operate. Again, in January 1999 the Director issued Cease Operations orders against an operator of 11 surface mine sites in San Bernardino County. None of these sites had obtained lead agency approved reclamation plans or financial assurances, and were also in violation of the County's surface mining ordinance in that they did not have County permits.

The SMGB upheld the Director's Orders for Closure against all of these operations following SMARA-mandated SMGB reviews in April, 1997 and March, 1999, respectively.

Lead Agencies

There are 129 SMARA lead agencies (cities and counties) charged with the primary enforcement and administration of the Act. Specific duties of lead agencies are to:

Item 1—review and approve reclamation plans that meet the minimum requirements established by SMARA and the SMGB's reclamation performance standards (regulations) for surface mines;

Item 2—approve sufficient financial assurances (subject to annual review) for full reclamation costs of disturbed lands by surface mining operations, according to the reclamation plan requirements;

Item 3—approve local permits for mining operations;

Item 4—conduct an annual inspection of each surface mine to confirm that the operation is in compliance with the requirements of its local permit and the reclamation plan, and to remedy the situation if the operation is not in compliance;

Item 5—issue Administrative Penalties to non-compliant operators;

Item 6—close operations that do not attain compliance;

Item 7—maintain a surface mining ordinance that is in accordance with current SMARA;

Item 8—incorporate Mineral Resource Management Policies into their General Plans if there are mineral "classified" or mineral "designated" lands within the lead agency's jurisdiction.

[*Statistic:* On July 1, 1998, 1,326 surface mines filed annual reports and paid fees for the 1997 calendar reporting year; however, only 1,042 of these mines qualifed for the "3098 List"—that is, had an approved reclamation plan and financial assurance and therefore could have sold product to the state. Therefore, 284 mines (21% of those reporting) either do not meet the criteria established to enable them to sell materials to the state, or were Idle or Reclaiming.]

[*Statistic:* 3098 List: The list was mandated by the Statutes of 1992 under AB 3098, which made the effective date for the use of the "List" July 1, 1993(reference PRC § 2717[b]). On June 30, 1993, only 414 mines (36%) were eligible for the first List containing 1,154 mines that had reported the previous July, 1992.]

Item 1—Many lead agencies are diligent in their reviews and approvals of reclamation plans as being in accordance with SMARA and the SMGB's regulations; others, for a variety of reasons, are less able to perform adequate reviews of reclamation plans and rely extensively on the DOC's technical review comments.

Item 2—Annually, lead agencies must review financial assurances and adjust the amounts to cover any changes to the reclamation costs. This financial assurance review should be accomplished during the mandatory annual inspection process. Following the field inspection, the lead agency should require a recalculation of the required financial assurance amount to adjust for changes in the amount of newly disturbed and reclaimed land and economic inflation. Financial assurances very seldom are adjusted, and are believed by the DOC to have become, in some instances, inadequate. Also, according to the DOC, because the annual inspection rate performed by some lead agencies is very low, there is no accurate basis for adjusting the financial assurance amounts for mines within those jurisdictions.

[*Statistic:* In 1996 the DOC estimated that the cost of reclamation in California should range between $2,286 and $12,430 per acre, with an additional 50% cost for toxic or hazardous material remediation.]

Item 3—Surface mines in existence prior to January 1, 1976 (effective date of SMARA) that have continued operations are considered "vested" sites. These sites are exempt from having to obtain local operating permits from their lead agency. Most lead agencies clearly distinguish the difference between vested and non-vested operations; however, a few continue to grant vested status to

operations on sites not in existence before 1976, or to sites that clearly were abandoned and had ceased all operations prior to 1976. In at least one case, this type of lead agency action has led to a local lawsuit.

Item 4—Annually, lead agencies must inspect surface mines within their jurisdictions to verify that the mines are operating according to the requirements of their local permits and their reclamation plans. For the reporting year 1997, the lead agency record of compliance was poor, there being only about one-half of the mines in the State having been inspected.

In 1995 the SMGB requested statistics from the DOC on the lead agency compliance rate for inspecting surface mines. The 1995 list of inspections was current through March 1995. The list was divided into lead agency categories of those having 50% or less mines inspected, 51%-75% inspected, and 76% or greater inspected.

There were 45 lead agencies that reported inspecting less than 50% of the mines within their respective jurisdictions (this represents approximately 37% of the state's then 123 lead agencies). Of these 45 lead agencies, 23 (51%) submitted no reports at all. Thirty of these 45 lead agencies were, also, on a 1993 list of inspecting less than 50% of their mines. Only 39 lead agencies (32% of the state's 123 lead agencies) reported greater than 76% of their mines inspected.

The statistics for today's mine inspections are believed to be slightly improved from these earlier studies, with perhaps 70% of the surface mines being inspected on an annual basis by their lead agencies.

Item 5—Since 1991, it is believed that lead agencies have issued only one Administrative Penalty against a surface mine operator for violating SMARA. Lead agencies have enforced local permit violations; however, they mostly have left the issue of SMARA administrative penalty fines to the DOC.

Item 6—At least four lead agencies have threatened errant surface mine operators with closure (Kern County, 1 mine; Santa Barbara County, 2 mines; Sacramento County, 1 mine; and Mariposa County, 1 mine).

Item 7—SMARA requires lead agencies periodically to update their surface mining ordinances. In 1997 the SMGB determined that 76% of lead agency SMARA ordinances were adopted prior to 1991, and that three-quarters of those were adopted prior to 1987 (10 years old). Since major changes were made to SMARA in 1990 and 1991, three-quarters of lead agency ordinances were not in accordance with state law in 1997.

Item 8—Lead agencies are required to incorporate Mineral Resource Management Policies (MRMP) when revising their General Plans upon revision of their plans. Thirty-six lead agencies have mineral classified or mineral designated lands within their jurisdictions. Although MRMP's are required to be sent to the SMGB for review prior to their incorporation into local General Plans, most lead agencies seem not to have done so. Also, because MRMP information may be placed in more than one section or element in a General Plan, it can be difficult to find the MRMP if it is not clearly identified. In the heavily urbanized areas of Southern California and the San Francisco Bay Area, it is believed that four of the 14 lead agencies in the Bay Area, and 16 of the 20 lead agencies in Southern California, had not included MRMP information in their General Plans.

ENFORCEMENT HISTORY OF THE STATE MINING & GEOLOGY BOARD

Under SMARA, the SMGB is granted authority to act on the following items:

Item 1—review and certify lead agency surface mining ordinances;

Item 2—review certain orders of the Director before they become effective;

Item 3—assume local lead agency authority for administering and enforcing SMARA under specified circumstances;

Item 4—adjudicate appeals from individuals and mine operators of certain lead agency actions;

Item 5—adjudicate appeals of Administrative Penalties issued by the Director;

Item 6—exempt from the requirements of SMARA specific surface mining operations;

Item 7—designate specific areas as having economic mineral significance to a general region of the state;

Item 8—make regulations implementing the statutes.

Item 1—SMARA requires each lead agency (City and County) to have a surface mining and reclamation ordinance that is in accordance with the Act. To ensure ordinances are in compliance, the SMGB is granted authority to review and certify these local ordinances that meet SMARA requirements. At the end of 1991, there were about 119 lead agencies, and all had SMGB certified mining ordinances as required by SMARA. About 40 of these lead agencies had ordinances adopted ten years earlier in 1981. As of June 30, 1999 there are 129 SMARA lead agencies in the State.

SMARA requires that lead agencies periodically revise these ordinances to keep them in accordance with legislative changes to the Act. The SMGB is required to certify these ordinances before they become effective. The SMGB is also involved with a major project to bring all lead agency ordinances into accordance with SMARA. During 1998, the SMGB reviewed 90 lead agency ordinances certified prior to 1991 (when major changes occurred to SMARA), and determined 68 of them were deficient. These agencies with deficient ordinances were notified of the need to update their ordinances according to a time table established in statute.

Since January, 1999 the SMGB has assumed limited SMARA authority for 25 lead agencies that defaulted on revising their ordinances within statutory time limits. The SMGB, also, is acting with full lead agency authority (except for permitting authority) for 11 additional jurisdictions that have no surface mining ordinances.

Item 2—When the Director issues an Order to a surface mine operator to bring its operations into compliance with SMARA, that Order does not become effective until it has been heard by the SMGB in public session. The Director brought three Orders to the SMGB in April 1997. These Orders were for the Closure of three non-compliant surface mine operations in El Dorado County. These operators had not obtained County approved reclamation plans or financial assurances. Two of the surface mines had operated for over 20 years while out of compliance with SMARA. The SMGB upheld the Director's Orders for Closure.

In January 1999 the Director issued Cease Operations orders against an operator of 11 surface mine sites in San Bernardino County. None of these sites had obtained lead agency approved reclamation plans or financial assurances, and they, also, were in violation of the County's surface mining ordinance in that they did not possess County permits. The SMGB upheld the Director's Orders for Closure against this operator in March, 1999.

Items 3 and 4—There are four circumstances when the SMGB is empowered to assume local lead agency authority: **[a]** when the lead agency's mining ordinance has been determined to be deficient, then the SMGB will assume authority to review and approve new reclamation plans and plan amendments until a revised ordinance is certified by the SMGB; **[b]** when a local jurisdiction has no mining ordinance, yet has a mining, or proposed mining, operation within its jurisdiction; **[c]** when the SMGB accepts an appeal petition from an aggrieved person regarding a lead agency's inaction or its denial of a reclamation plan or financial assurance, the SMGB may uphold or override that denial; **[d]** when the SMGB determines that a lead agency has failed in one or more of its responsibilities under SMARA.

The SMGB has assumed lead agency authority since 1991 for the review and approval of reclamation plans since the lead agency's surface mining ordinance was deficient 29 times (Circumstance [a] above). Currently, the SMGB is acting in this capacity for 24 lead agencies.

The SMGB has assumed lead agency authority 15 times since 1991 for jurisdictions that have no surface mining ordinances (Circumstance [b]]above). Currently, the SMGB is acting in this capacity for 11 lead agencies.

Reclamation Plan Appeals (Circumstance [c] above): The SMGB has received 45 reclamation plan appeals since 1991, and has accepted 19 of them; 17 appeals have been processed by the SMGB, and two are still active.

Financial Assurance Appeals (Circumstance [c] above): Financial assurances became a requirement in 1991. SMARA (PRC § 2770[c]) required lead agencies to review *existing* financial assurances by January 1, 1992. SMARA (PRC § 2770[d]) requires *all* mines to have financial assurances in place by January 1, 1994, or cease operations until financial assurances are approved by the lead agency—unless the operator had appealed the financial assurance amount to the SMGB.

In 1993, AB 723 limited those without approved financial assurances to be on appeal to the SMGB for only 180 days (reference PRC § 2717), after which these appellants fell off the AB 3098 List and could no longer sell product to state agencies. (This requirement apparently spurred a rash of activity to get financial assurances approved).

Although the DOC reviewed some financial assurances in 1992 as they trickled in from the lead agencies, the real rush commenced in 1993. Operators whose financial assurances were denied by a lead agency, or who submitted them too late to make the January 1, 1994 deadline after going through the lead agency-DOC-lead agency review process, appealed directly to the SMGB for relief.

From Spring 1993 to Spring 1994, the SMGB processed 369 financial assurance appeals (about one per day). The SMGB determined that 293 of these appeals were within the SMGB's jurisdiction. Subsequently, 189 appellants withdrew their cases of their own accord, either having agreed to a financial assurance amount that met their lead agencies' requirements, or deciding not to get any at all for the time being.

The SMGB has not assumed total SMARA authority from any lead agency to date (Circumstance [d] above). In 1992/1993 the SMGB considered taking over actions against six lead agencies; however, it dropped those considerations when the DOC and the lead agencies came to agreements on the disputed issues. The SMGB has conducted six special hearings since then to address complaints from both the mining industry and residents about their lead agencies' actions.

Humboldt County (1995): A coalition of environmental and mining industry groups appealed to the SMGB to take over the County's administration of SMARA. A special committee of the SMGB held an extraordinary hearing in the County, during which the County and the aggrieved parties were able to resolve their issues to their mutual satisfactions. As a result of the meeting, the County rewrote its surface mining ordinance, which was certified by the SMGB in 1996.

Amador County (1995-1996): As a result of a local citizen's lawsuit against the County, the County presented its ordinance to the SMGB for review. The SMGB found the ordinance deficient under SMARA, and assumed the County's responsibilities to review and approve reclamation plans when the County did not revise its ordinance within the statutory time. A special committee of the SMGB held an extraordinary hearing in the County in which the requirements for a revised ordinance were presented. The County's revised ordinance was certified by the SMGB in 1996.

Ventura County (1996): Mining industry complaints to the SMGB that Ventura County was allowing the operation of an illegal surface mine prompted a SMGB investigation. During an extraordinary meeting of the full SMGB in May, the SMGB determined that the surface activities were a mine subject to SMARA, and instructed the County to order a cessation of operations at the site and bring the site into SMARA compliance. The County agreed to the SMGB's requests.

Sun City (Riverside County) (1996): The Riverside County Board of Supervisors had denied a permit to a large mining corporation to conduct surface mining operations on land near an established retirement community. The retirement community was strongly opposed to the introduction of the mining operation. The mining corporation appealed the denial of the permit to the SMGB. The corporation claimed that the denial was not based on the technical contents and adequacy of the reclamation plan as required by SMARA, and the denial was, therefore, unjust. The SMGB determined that the County's denial of the permit was for reasons associated with the permit, not with reasons associated with the adequacy of the reclamation plan; therefore, the denial of the permit was allowed under SMARA.

City of Atascadero (1996): A concerned group of homeowners and a nearby surface mine operation were at loggerheads with the City to resolve a dispute between the two aggrieved parties. Following a special meeting with the affected parties and a delegation from the SMGB, the parties were able to satisfactorily resolve their differences. The SMGB received a special thanks from the City for its efforts.

El Dorado County (1997): Responding to complaints from local residents alleging their County's failure to enforce SMARA, a special committee of the SMGB held an extraordinary meeting in August to receive comments from the residents, the industry, and the County. The performance of the County as a lead agency continues under SMGB investigation.

Item 5—Of the 199 Administrative Penalties issued by the Director since November 1991, the SMGB has received petitions for appeals for 61 of the Penalties. Of these, the SMGB has heard 42 cases; the remaining 18 appeals were either settled by the DOC prior to being heard by the SMGB, or the SMGB denied the petition for lack of merit (8 appeals).

Item 6—The SMGB may exempt from the requirements of SMARA surface mining operations that are of short duration and cause limited surface disturbance. Since 1991 the SMGB has reviewed 17 petitions for exemption, and granted 10 exemptions, denied 6 petitions, and has one petition pending.

Item 7—(For a discussion of Mineral Land Classification and Designation, refer to the **Mineral Resources Conservation**, page 16.)

Item 8—The bulk of the SMGB's regulations pertaining to reclamation performance standards were adopted on January 15, 1992 following earlier changes to SMARA that mandated the SMGB provide for these regulations. These regulations are contained in the California Code of Regulations § 3500 et seq. and § 3700 et seq. Since then, most regulatory action has been to clarify portions of the Act and Public Resources Code § 2207.

Summary of SMARA Regulations Adopted by the SMGB

- *Financial Assurance Appeals:* Adopted in December, 1991 this regulatory language added CCR §§ 3680–3690 that established an appeals and petition process for handling financial assurance appeals to the SMGB. These regulations were necessary to implement amendments to SMARA made by AB 3551 and AB 3903 (Sher) passed in 1990, and AB 1506 (Sher) passed in 1991, that required financial assurances for all surface mining operations.

- *Financial Assurance Mechanisms:* Adopted in 1994, this regulatory language added CCR § 3800 et seq. defining additional acceptable financial assurance mechanisms, and describing the minimum criteria to be used for estimating financial assurance amounts.

- *Flood Control Structures:* Adopted in 1997, this regulatory language added to CCR § 3505 clarified PRC § 2714 and provided special exemption from SMARA for the cleaning out of previously approved and constructed, engineered flood control structures, such as behind dams and spillways, lined culverts, etc.

This action was brought following conflicting opinions and decisions among lead agencies and surface mining operators whether the cleaning out of streams and channels after flood conditions constituted instream mining subject to SMARA. The SMGB defined that only the cleaning out of constructed engineered structures that were designed for flood control were exempt from SMARA, since this action was, in effect, reclaiming the facility to its originally approved use. Removal of naturally deposited mineral material from open channels, rivers, and streams following flood conditions is not exempt from SMARA. This action was a public, cooperative effort involving surface mine operators, mining industry associations, lead agencies, the Department of Conservation, and the general public.

- *Farming Exemption:* Adopted in 1997 regulatory language amending CCR § 3501 and § 3505 defining the SMARA Farming Exemption contained in PRC § 2714.

  This action was brought following conflicting opinions and decisions among lead agencies and surface mining operators about whether the removal of large amounts of topsoil and other mineral materials from farmlands for commercial sale was subject to SMARA as a surface mining operation. Over two dozen complaints were received by the Department of Conservation regarding mining operators who were functioning under the claim of exemption as a farming operation. This new regulatory action defines agricultural activities which are exempt from SMARA, and those activities that are subject to SMARA. The SMGB had the full support of the California Farm Bureau.

- *Annual Reporting Fees:* Adopted in 1997, this regulatory language implemented legislative changes to PRC § 2207 requiring the setting of annual mine reporting fees by the SMGB. Prior to the legislative changes, the SMGB annually had to fix the mine reporting fees by the emergency regulatory process. The new regulatory language allows the SMGB to set fees administratively on an annual basis, allowing for timely public input.

- *Administrative Penalty Petitions:* Adopted in 1998, this regulatory language created CCR § 3900 et seq. defining the procedures to be followed by the SMGB in hearing Administrative Penalty Petitions (appeals). These regulations were mandated by changes to the California Administrative Procedures Act that became effective in July, 1997.

Summary of SMARA Guidelines Adopted by the SMGB

The SMGB adopted the following guidelines pursuant to its statutory authority under SMARA and PRC § 2207:

- *Financial Assurance Guideline:* This guideline was developed by the SMGB's Financial Assurance Committee and adopted by the SMGB on January 23, 1993. The original guideline was designed to clarify existing statute. The guideline has been updated several times since 1993, the latest edition being issued on June 10, 1998. This last edition contains examples of Surety Bond Forms adopted into regulation by the State Attorney General. The guidelines do not create any new requirements for mining operators or local lead agencies.

- *Principles for Addressing Idle Mining Operations:* Adopted in November, 1994 and revised in March, 1996 this guideline is designed to clarify provisions of SMARA and PRC § 2207 relating to the requirements for determining a mine's operating status as "Idle" as defined in statute. The guideline is formatted in a question-and-answer style and includes three hypothetical scenarios for determining if a surface mine requires an Interim Management Plan under SMARA. These Principles do not place additional requirements on mining operations, nor do they limit a lead agency's ability to regulate idle mines in accordance with state or federal law or local ordinances.

- *Reclamation Plan Prototype:* Adopted in May, 1995 this Prototype Plan is intended to assist smaller-scale mine operators in environmentally non-sensitive areas to conform to the requirements of SMARA and related SMGB regulations. The guideline serves as an example of an acceptable reclamation plan format, and was developed in coordination with industry and lead agency assistance. The Prototype is not intended to place any additional requirements on mining operators, nor to limit lead agency control in implementing SMARA's reclamation requirements.

- *Model SMARA Ordinance:* Adopted in May, 1996 this Model is intended for use by city and county lead agencies desiring assistance in developing their SMARA ordinances that are required under statute. The Model contains each of the elements required to be in a SMARA ordinance, as well as some additional elements common to ordinances in use statewide. It is designed to be modified, as appropriate, to reflect local conditions and practices. The use of the Model is discretionary, and its form is not mandated by law.

MINERAL RESOURCES CONSERVATION

California is one of the nation's leading mining states in terms of both value and diversity of minerals produced. There are over 1,300 reporting mines and quarries, which when combined, produced in 1998, approximately $2.97 billion worth of non-fuel minerals.

About 80 non-fuel minerals are known to have been produced commercially at one time or another in the state. Approximately 35 mineral commodities currently are being mined. Principal minerals include aggregate, carbonate rock, borate minerals, rare-earth minerals, diatomite, gypsum, asbestos, magnesium and sodium compounds, calcium chloride, specialty and common clays, specialty sand, and gold. The largest group of active mines produce construction grade aggregate, followed by industrial minerals, and finally metals. Commercial mines are found in 57 of the state's 58 counties.

As California's population continues to grow rapidly, its communities face increasingly difficult and complex land use decisions. The production of mineral resources—so necessary to support an expanding population—must compete with other land uses such as agriculture, timber forests, urban development, and recreational, sensitive ecological and scenic areas. The rapid growth of many communities and the incompatibility of mining with most other land uses sometimes has resulted in heated conflicts within those communities. Often, the mineral resource is needed by the very use which threatens it. For example, construction grade aggregate deposits, which are the sources for the construction and repair of roads, houses, and commercial buildings, often are built over before the resource can be extracted.

In an effort to address this issue, SMARA provides for a method by which mineral lands may be "Classified" by the State Geologist, and "Designated" by the State Mining and Geology Board. These Classification and Designation processes are methods by which an inventory of the state's most valuable mineral deposits can be compiled and made available to local communities for inclusion in their land use decision making.

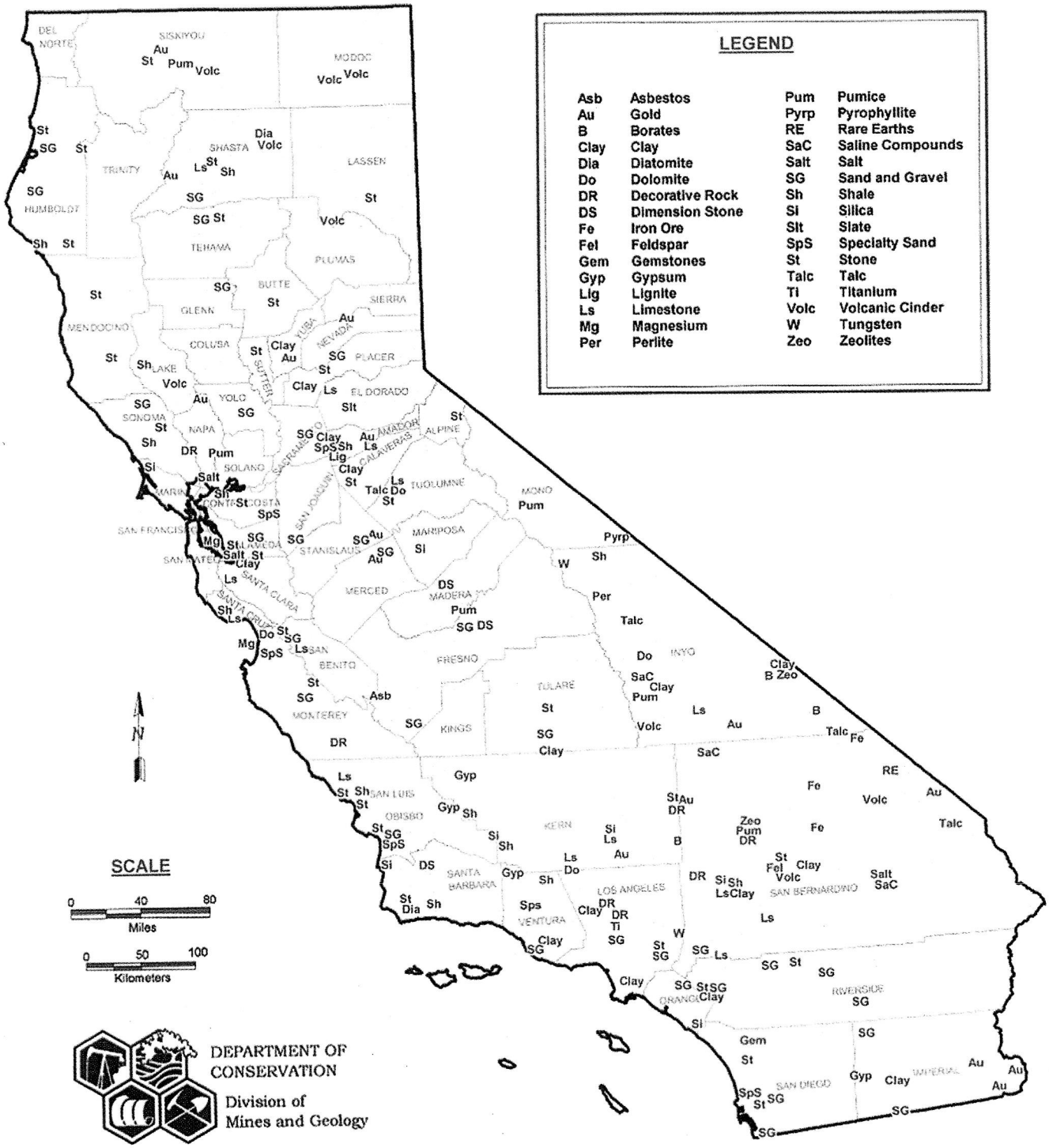
Classification is the action in which the State Geologist, in accordance with a time schedule and based upon guidelines adopted by the SMGB, geologically evaluates the state's lands and categorizes those lands as: (1) having little or no mineral deposits; (2) areas containing significant mineral deposits; and, (3) areas containing mineral deposits, the significance of which requires further evaluation. These determinations by the State Geologist are made based solely on geologic factors, and without regard to existing land use or land ownership. Mineral Classification information is transmitted to the SMGB by the State Geologist, and then is provided to locally affected jurisdictions (cities and counties) by the SMGB.

In some regions, large portions of the areas classified as having significant mineral deposits are already committed to other various urban uses, which prohibit access to the underlying resources. As an additional aid to local planning agencies, classification reports prepared for metropolitan

CALIFORNIA

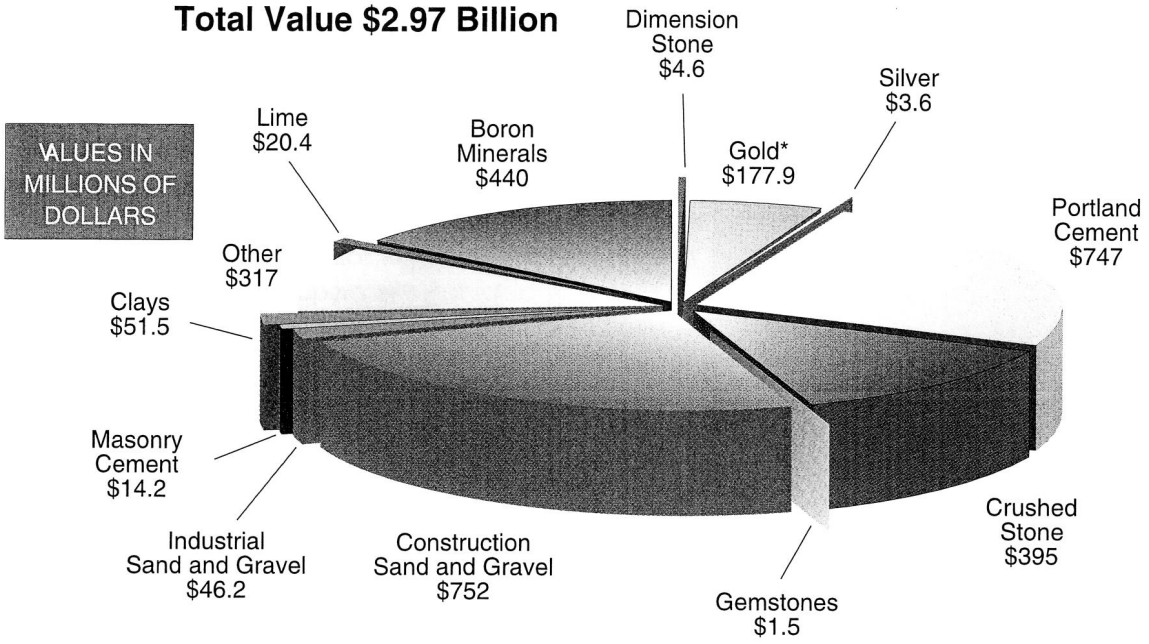
Principal Mineral - Producing Localities

1990 - 1999



Map produced by: Leslie G. Youngs and Susan Kohler-Antablin

CALIFORNIA NON-FUEL MINERALS—1998



OTHER INCLUDES: Asbestos, diatomite, feldspar, gypsum, iron ore, magnesium compounds, mercury, perlite, potash, pumice and pumicite, pyrophyllite, rare earths, salt, soda ash, sodium sulfate, talc, and titanium concentrates (ilmenite).

Data from U.S. Geological Survey Mineral Information Service (preliminary)

** Data from California Department of Conservation Division of Mines and Geology*

areas also highlight non-urbanized portions of the classified mineral lands as Aggregate Resource Areas (ARA). These non-urbanized ARA's contain mineral deposits that remain potentially available for future use and show an estimated volume of aggregate material that is practically available in the region. ARA's may be considered for Designation by the SMGB.

Designation is the process by which the SMGB determines that a particular mineral classified deposit is of regional (multi-community) or statewide economic significance. This designation is based on analyses by the State Geologist, the Division of Mines and Geology, and information gathered from local communities, the mining industry, and other government agencies such as the Governor's Office of Planning and Research. In contrast to Classification, which inventories mineral deposits without regard to existing land use, the purpose of Designation is to identify those areas that are of prime importance in meeting the future needs of the study region and that remain available from a land use perspective.

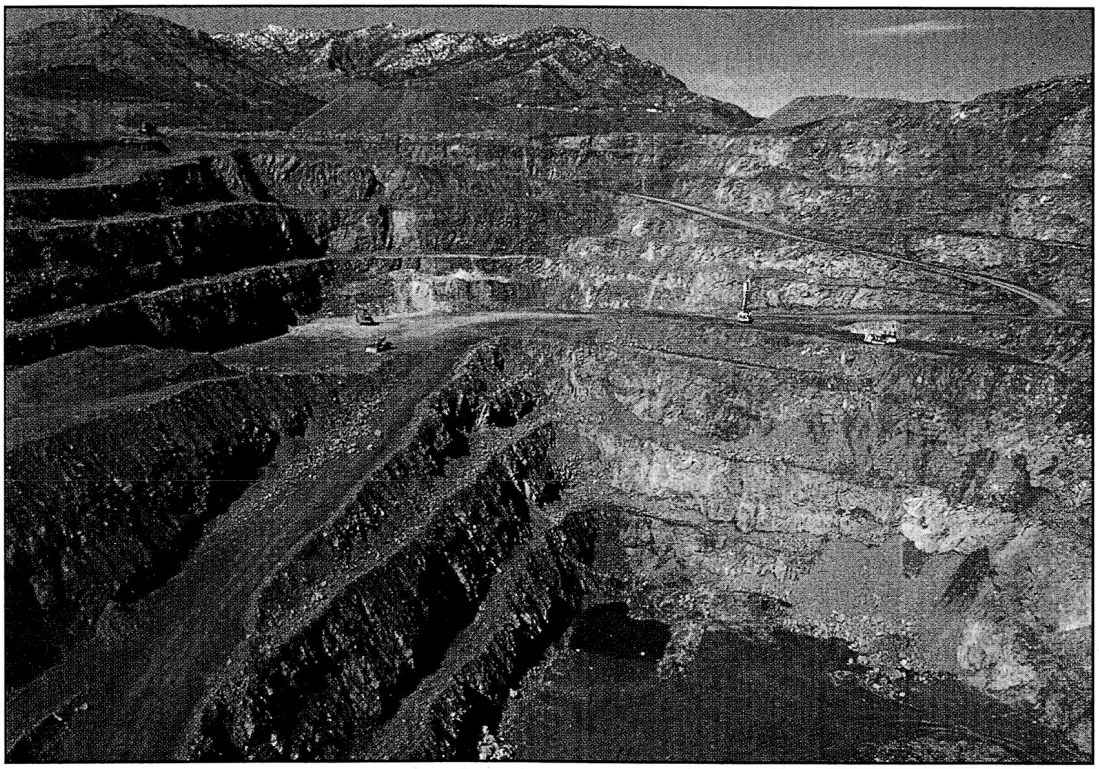
The objective is to provide local agency decision makers with information on the location, need, and importance of mineral resources within their jurisdiction, and to require that this information be considered in local land use planning decisions. This objective is met through the adoption of local Mineral Resource Management Policies that provide for the conservation and prudent development of these mineral deposits.

One of the first mineral commodities selected by the SMGB for classification by the State Geologist was construction grade aggregates, such as sand, gravel, and crushed rock. The importance of construction aggregate is often overlooked, even though it is an essential commodity in today's society. Aggregate is a key component in products

such as portland cement concrete, asphaltic concrete (macadam), railroad ballast, stucco, road base, and fill materials.

California's construction industry is greatly dependent on readily available aggregate deposits that are within a reasonable distance to market regions. Aggregate is a low unit-value, high bulk-weight commodity; therefore, aggregate for construction must be obtained from nearby sources in order to minimize costs to the consumer. If nearby aggregate sources do not exist, then transportation costs can quickly exceed the aggregate value. Transportation cost is one of the most important factors considered when defining the market area for an aggregate mine operation.

Prior to 1991, the SMGB designated 15 areas within the state, encompassing 259,585 acres, as having regionally significant economic mineral resources. Designation stopped when the costs of complying with the requirements of the California Environmental Quality Act became prohibitive, and agency budgets were being reduced because of the "California economic recession" of the early 1990s. Since that time, no additional areas have received mineral Designation status from the SMGB. Designation is an effort to conserve mineral resources in regions of expected rapid urbanization or other land uses that might prevent surface mining activities, and therefore result in a loss of the mineral resource to the community. To avoid dictating to local communities where future aggregate mines should be located, mineral designated areas generally contain resources (unpermitted deposits) that are far in excess of the region's 50-year demand. This attempts to provide maximum flexibility to local governments in making land use decisions, while still conserving an adequate amount of construction aggregate for the future.



View of Molycorp Inc.'s Mountain Pass Rare Earth Mine, San Bernardino County. The pit is about 400 feet deep. Conventional open-pit mining methods are being used to extract bastnasite which contains 15 different rare earth elements. The Mountain Pass orebody is the largest known deposit of rare earth elements in the western hemisphere. *Photo by Robert Hill.*

Since 1991, as part of SMARA's Mineral Land Classification requirements, the SMGB has accepted 20 Mineral Classification Reports and Classification Update Reports prepared by the State Geologist and the Division of Mines and Geology, covering approximately 15,841 square miles (10,138,240 acres).

A series of Mineral Land Classification reports completed in the 1980s for the fast growing coastal areas of Southern California and the South San Francisco Bay area were updated in the early and mid-1990's. Counties included in the update are Ventura, Los Angeles, Orange and San Diego in Southern California, and Alameda, Contra Costa, San Francisco, San Mateo and Santa Clara in the Bay Area. These nine heavily urbanized counties have been divided into nine Production-Consumption Regions (P-C), each containing a group of aggregate producers and an associated market. Eight of these P-C Regions are in Southern California, and one comprises the southern Bay Area.

As shown in the following chart, the Greater Los Angeles area (San Fernando Valley and San Gabriel Valley) and Orange County P-C Regions soon will be depleted of their permitted reserves, as will Western San Diego County. Western Ventura County's permitted aggregate reserves have been exhausted. If additional aggregate mineral resources are not permitted to be mined locally, then aggregate supplies will need to be imported into these fast growing urban areas at additional costs to the consumers, both in terms of dollar costs for transportation as well as environmental impacts caused by transportation activities (traffic, air pollution, fuel consumption, noise, etc.). As P-C Regions exhaust their own permitted reserves and begin to draw upon the reserves of neighboring Regions, those neighboring P-C Regions will experience a more rapid depletion of their own reserves than is depicted in the chart.

The following chart summarizes the updated Classification Reports.

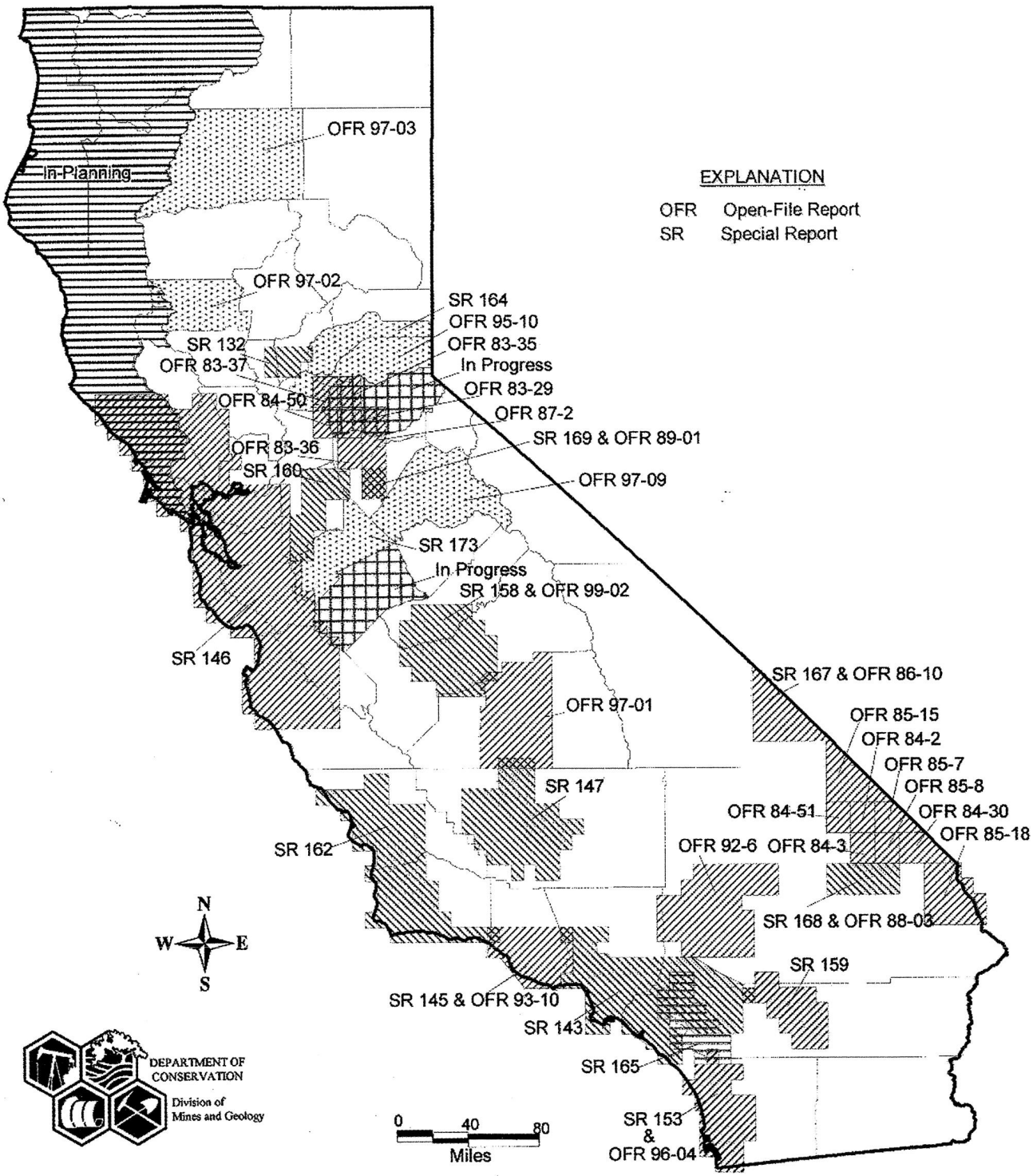
P-C Region	Annual Per Capita Consumption Rate in Update Report (date of report)	Aggregate Reserves (millions of tons)	Projected Depletion Date
San Fernando Valley	2.4 tons (1992)	(confidential)	2001
San Gabriel Valley	4.2 tons (1992)	334	~2017
Saugus-Newhall	9.9 tons (1992)	158	2046+
Palmdale	12.7 tons (1992)	207	2046+
Western Ventura County	7.2 tons (1991)	None	1996
Simi	6.2 tons (1991)	15	~2046
*Orange County	5.3 tons (1992)	67	2009
Western San Diego County	5.4 tons (1994)	352	2016
South San Francisco Bay	5.7 tons (1994)	676	2024

* Orange County supplies only 38% of its demand, the remainder is imported from outside. [*From* CALIFORNIA GEOLOGY, *January/February 1997, Russell V. Miller*]

Index Map of SMARA Mineral Land Classification Reports

Map 1 of 2*

October 1999

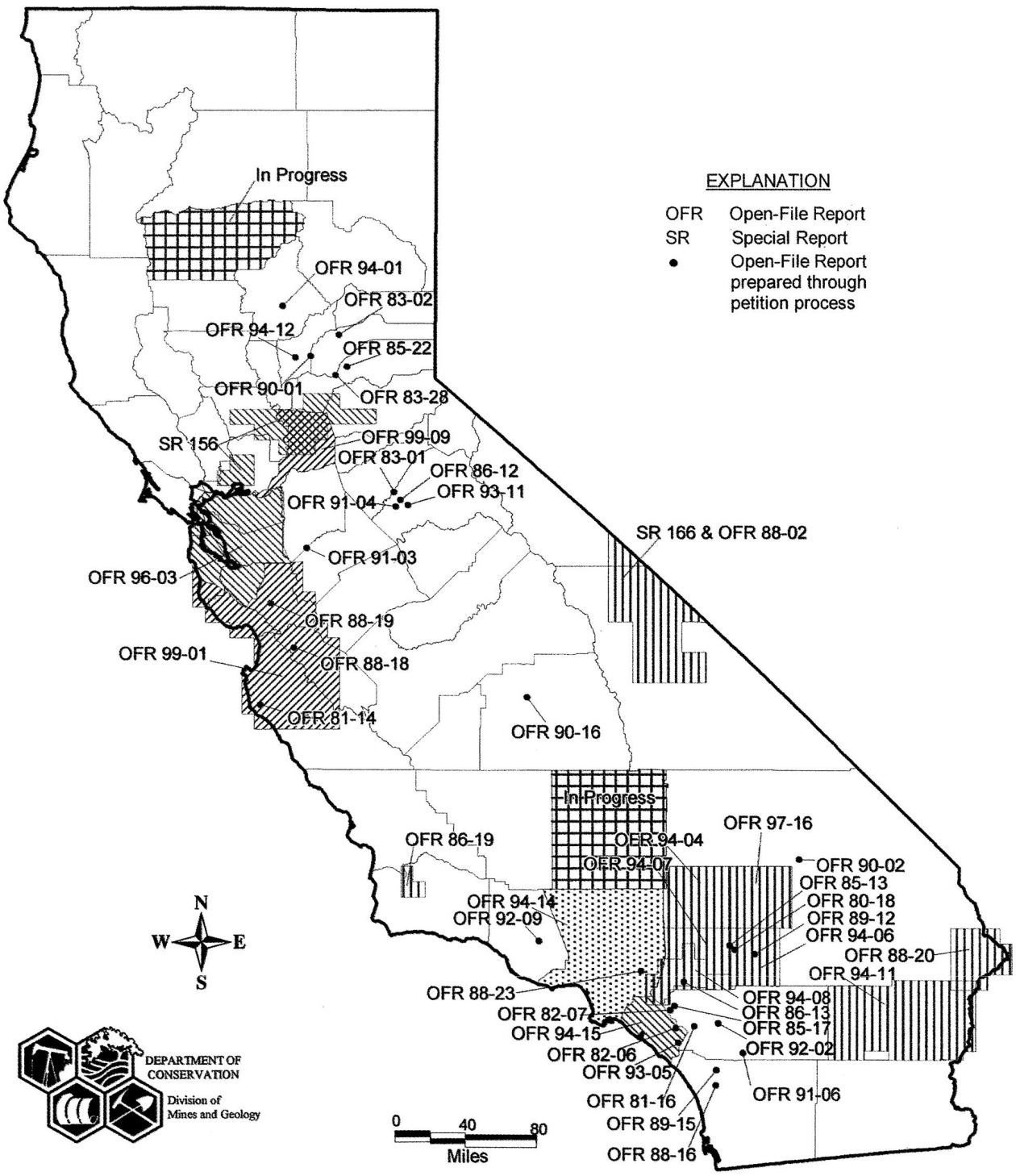


* The SMARA report locales are shown on two index maps and with varied rendering for map clarity.

Index Map of SMARA Mineral Land Classification Reports

Map 2 of 2*

October 1999



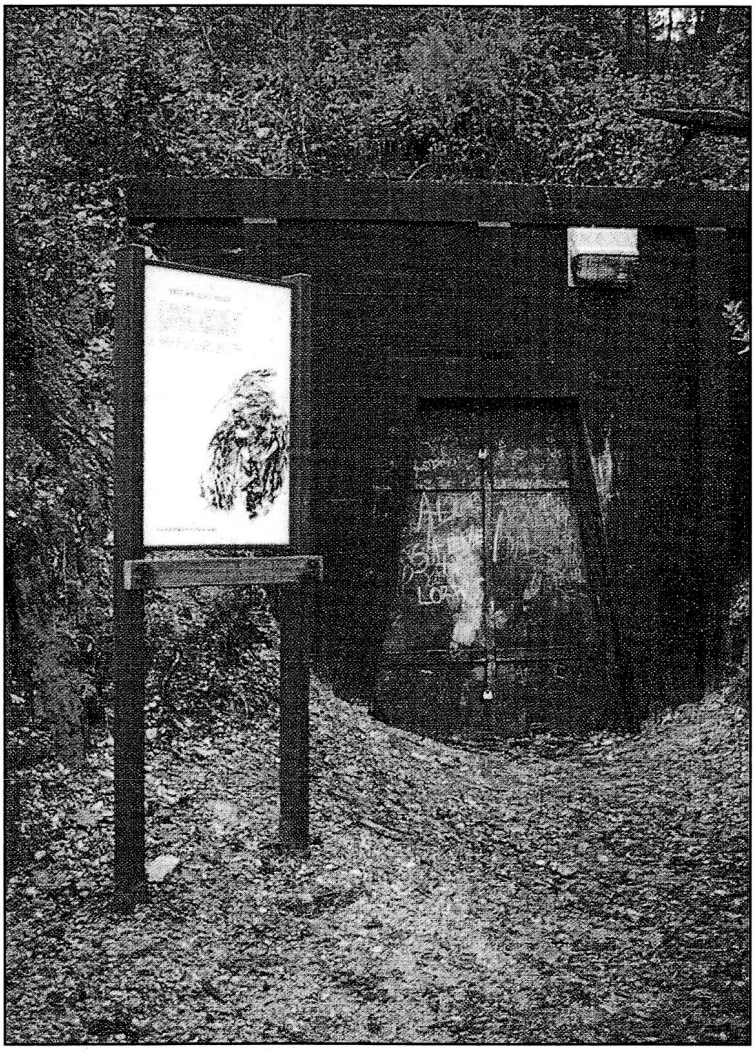
* The SMARA report locales are shown on two index maps and with varied rendering for map clarity.

ABANDONED MINE LANDS PROGRAM

Commencing in fiscal year 1997/1998, the Abandoned Mine Lands Unit was created within the DOC's Office of Mine Reclamation. This new unit has been charged with locating, inventorying, and characterizing the state's pre-SMARA (i.e.,before January 1, 1976 when SMARA become effective) historic abandoned mines. The Board fully supports the implementation of this program, and is represented on the DOC's Abandoned Mines Task Force.

Many of these pre-SMARA mines that ceased operations before site reclamation was a state requirement and before various environmental regulations were enacted have been found to be hazardous and a threat to the natural environment. In rapidly urbanizing areas as well as in heavily used recreational areas, these old mines may pose a very significant threat to the health and safety of the human population. The low level of knowledge about the locations and effects of abandoned mines on the well being of local communities is becoming more evident in the face of new disclosure requirements for land-use planning and development.

For years, both local jurisdictions and state agencies have had authority over abandoned mines that adversely affected water quality (Regional Water Quality Control Board), or that contained escapable hazardous wastes (Department of Toxic Substances Control). However, there has not been a statewide clearinghouse for information regarding the character and type of abandoned mines, nor has there been a statewide coordinated effort to address abandoned mine health and safety issues. This new program hopes to fill this void.



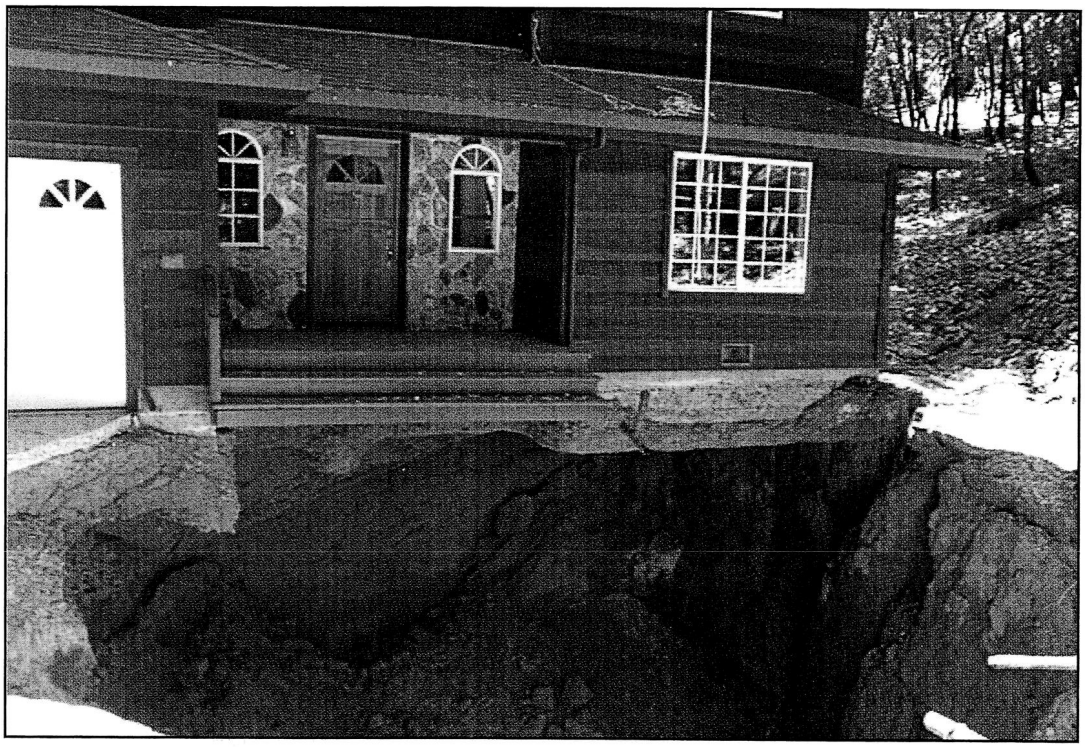
Historial landmark, abandoned Goldbug Mine in El Dorado County.
Photo by Max Flanery.

In other states, identification of "historic" and abandoned mines has been the first step in obtaining state and federal monies to help cleanup some of the more serious problem sites and to close dangerous adits and shafts. Recognizing the potential for economic, environmental and social benefits to downstream users of impaired streams, state and federal agencies, municipalities, and citizen groups have come together to address abandoned mine issues throughout the U. S.

The Office of Mine Reclamation estimates that there are 30,000 historic abandoned mines in California for the Abandoned Mine Lands Unit (AMLU) to inventory. In order to tackle this enormous task in a logical fashion, the unit will use a watershed approach that begins in the areas with the highest potential threat to public health and safety and to the environment. AMLU is also working with other federal and state agencies and local organizations to compile and consolidate knowledge about these sites.

The unit is using a combination of new technologies (geographical information systems [GIS], global positioning systems, etc.), literature research, and field work. Existing databases previously developed by the Division of Mines and Geology (DMG) and U. S. Bureau of Mines form the nucleus of this work, with the DMG Library providing a wealth of information. Local knowledge is often the best resource for historic abandoned mine information. AMLU has established a toll-free telephone number (1-877-OLD MINE) to allow individuals throughout California easily to contribute to the inventory.

AMLU will provide to local governments an electronic copy of the data collected within the surveyed watershed study areas. These data will be in the form of an Access database that is linked to an ArcView GIS system. Local agencies will be able to query the mine database directly or display the information spatially. It is intended that this information will be in a form to aid local agencies in land-use and watershed planning decisions; and in applying to the state and federal government for grant funds to reclaim these abandoned sites.



In the Spring of 1998 an abandoned shaft of the historic Old Brunswick gold mine near Grass Valley, Nevada County collapsed under the site of a newly constructed house. *Photo by Gail Newton.*

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MAJOR BOARD ACTIONS PURSUANT TO THE ALQUIST-PRIOLO EARTHQUAKE FAULT ZONING ACT

The Alquist-Priolo Earthquake Fault Zoning Act provides for the mapping of "Earth quake Fault Zones" along the surface traces of active faults in California by the Division of Mines and Geology according to policies established by the SMGB. Maps of these Earthquake Fault Zones are provided to local governments for their land-use planning and decision making. The Act prohibits the construction of most structures for human occupancy, as defined, across the trace of an active fault. Lead agencies (cities and counties) affected by these Zones must regulate certain construction developments within the Zones. Lead agencies must not issue development permits for sites located within Earthquake Fault Zones until geologic investigations demonstrate that the sites are not threatened by surface displacement from future faulting.

This law initially was designated as the Alquist-Priolo Geologic Hazards Zones Act. In May, 1975 it was renamed the Alquist-Priolo Special Studies Zones Act. In January, 1994 the Act was given its current name. Information regarding the Act and an index of the mapped Earthquake Fault Zones is available in the Division of Mines and Geology's *Special Publication No. 42*.

As of May, 1998, 544 Official maps of Earthquake Fault Zones have been issued by the Division of Mines and Geology. Of these, 148 have been revised since their initial issue, and four maps have been withdrawn. Thirty-six counties and 100 cities are affected by the existing Earthquake Fault Zones.

Counties and cities affected by the existing Earthquake Fault Zones.

CITIES		
American Canyon	Coachella	Fortuna
Arcadia	Colton	Fremont
Arcata	Compton	Gardena
Bakersfield	Colton	Glendale
Banning	Concord	Hayward
Barstow	Corona	Hemet
Benecia	Culver City	Highland
Berkeley	Daly City	Hollister
Bishop	Danville	Huntington Beach
Brea	Desert Hot Springs	Indio
Calimesa	Dublin	Inglewood
Camarillo	El Cerrito	La Habra
Carson	Fairfield	La Habra Heights
Cathedral City	Fontana	Lake Elsinore

continued on next page...

Counties and cities affected by the existing Earthquake Fault Zones continued...

CITIES	San Jose	Fresno
Livermore	San Juan Bautista	Humboldt
Loma Linda	San Leandro	Imperial
Long Beach	San Luis Obispo	Inyo
Los Angeles	San Marino	Kern
Malibu	San Pablo	Lake
Mammoth Lakes	San Ramon	Lassen
Milpitas	Santa Clarita	Los Angeles
Monrovia	Santa Rosa	Marin
Moorpark	Seal Beach	Mendocino
Moreno Valley	Signal Hill	Merced
Morgan Hill	Simi Valley	Modoc
Murrieta	So. Pasadena	Mono
Oakland	Temecula	Monterey
Pacifica	Trinidad	Napa
Palmdale	Twentynine Palms	Orange
Palm Springs	Union City	Riverside
Palo Alto	Upland	San Benito
Pasadena	Ventura	San Bernardino
Pleasanton	Walnut Creek	San Diego
Portola Valley	Whittier	San Luis Obispo
Rancho Cucamonga	Willits	San Mateo
Redlands	Windsor	Santa Barbara
Rialto	Woodside	Santa Clara
Richmond	Yorba Linda	Santa Cruz
Ridgecrest	Yucaipa	Shasta
Rosemead	Yucca Valley	Siskiyou
San Bernardino	**COUNTIES**	Solano
San Bruno	Alameda	Sonoma
San Diego	Alpine	Stanislaus
San Fernando	Butte	Ventura
San Jacinto	Contra Costa	Yolo

Under the Act, upon the issuance of Preliminary Earthquake Fault Zone Maps by the State Geologist, the SMGB conducts public hearings within the affected lead agencies to receive technical comments about the maps. These comments are reviewed by the SMGB's Geohazards Committee, and then forwarded to the State Geologist for consideration for inclusion in the Official Earthquake Fault Zone Maps. The approval of a project by a city or county shall be in accordance with the policies and criteria established by the SMGB. Geologic reports prepared by affected lead agencies shall be in sufficient detail as to meet the SMGB's policies.

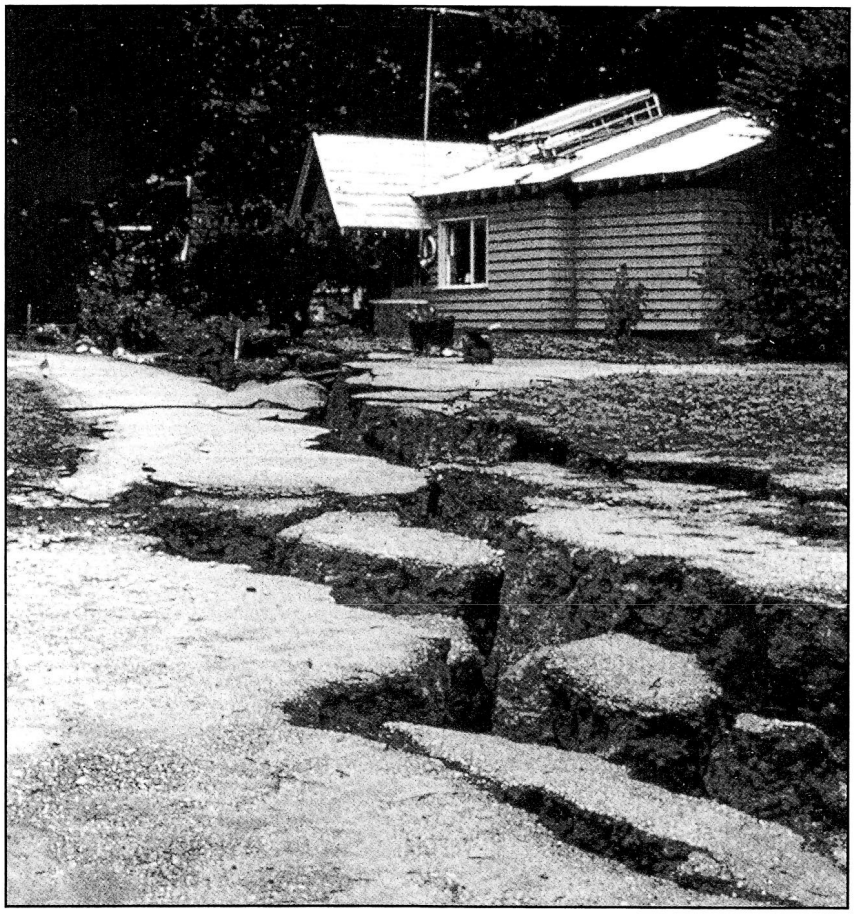
In January, 1997 the SMGB amended CCR § 3602 to require public notice following the publication of preliminary Alquist-Priolo Earthquake Fault Zone Maps. With this action lead agencies now have a more active role in notifying the public of mapped surface fault rupture zones in their communities; this action allows for more public comments. This action also requires the SMGB to notify the geological and geophysical consulting community when the preliminary maps are released, and to solicit their technical comments.

SUMMARY OF GUIDELINES ADOPTED BY THE SMGB

The SMGB adopted the following guidelines for use with the Alquist-Priolo Earthquake Fault Zoning Act.

- *Guidelines for Evaluating the Hazard of Surface Fault Rupture:* These guidelines, adopted by the SMGB in 1996 for advisory purposes, are intended to assist geologists who investigate faults relative to the hazard of surface fault rupture. The guidelines are published as *DMG Note 49.*

- *General Guidelines for Reviewing Geologic Reports:* These guidelines, adopted by the SMGB in 1996, are intended to provide general direction for those geologists who review geologic reports of consultants on behalf of agencies having approval authority over specific developments. These guidelines are published as *DMG Note 41.*



Extensional movement across a surface fracture in the Summit Road area, near the Santa Cruz County/Santa Clara County boundary, Santa Cruz Mountains.

Liquefaction can cause streets to collapse and utility lines to break. Photo shows craters and a natural gas pipeline fire along Balboa Boulevard in Granada Hills following the 1994 Northridge earthquake. Several nearby homes burned to the ground. *Photo courtesy of The Los Angeles Times.*

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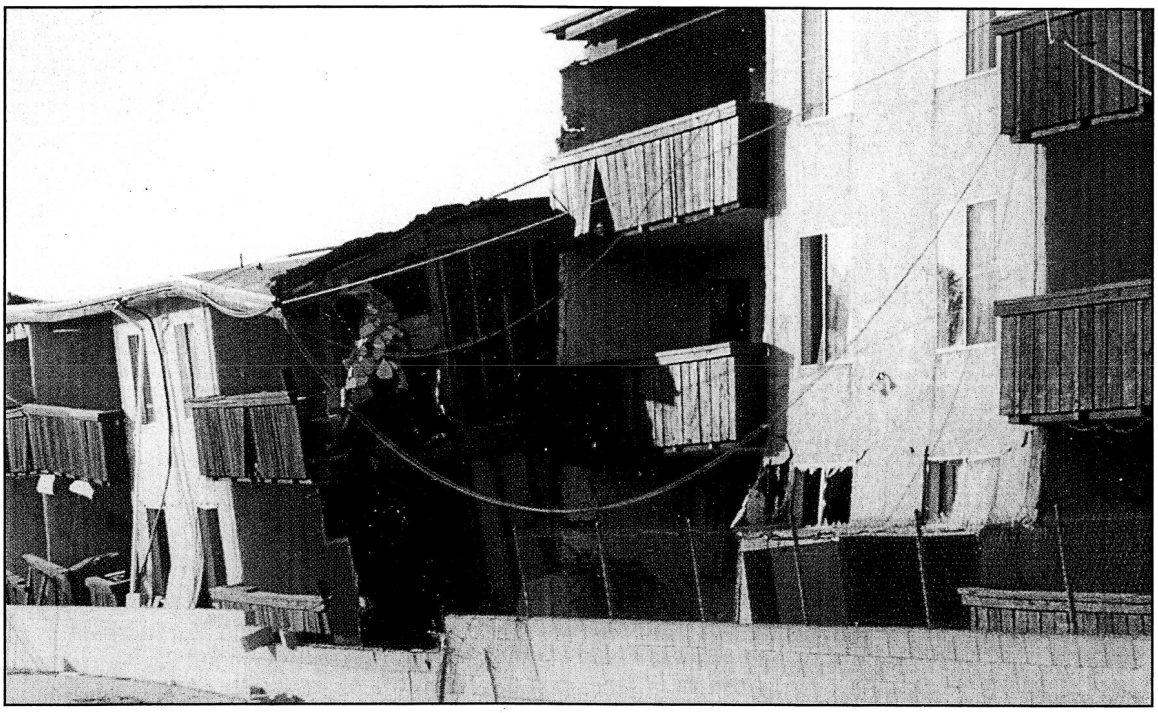
MAJOR BOARD ACTIONS PURSUANT TO THE SEISMIC HAZARDS MAPPING ACT

The Seismic Hazards Mapping Act became effective on April 1, 1991. It created a statewide seismic hazards mapping and technical advisory program to assist cities and counties in fulfilling their responsibilities for protecting the public's health and safety from the effects of strong ground shaking, liquefaction or other ground failure, landslides, and other seismic hazards caused by earthquakes. Specifically, the Act requires the delineation of seismic hazard zones by the Division of Mines and Geology, and the disclosure by sellers to prospective buyers of lands located in seismic hazard zones.

Under this Act the SMGB, in cooperation with the State Geologist, developed guidelines and priorities for mapping seismic hazard zones; policies and criteria for local and state agencies to implement the Act; and, guidelines for evaluating seismic hazards and recommending mitigation measures.

As required by the Act, the SMGB appointed an eight-member Seismic Hazards Mapping Act Advisory Committee (SHMAAC) for the purpose of developing the guidelines for evaluating seismic hazards. On March 13, 1997 the SMGB adopted the *Guidelines for Evaluating and Mitigating Seismic Hazards in California*. These Guidelines have been published by the Division of Mines and Geology as *Special Publication No. 117*. The



Northridge earthquake damage, January 1994. *Photo by Gerald R. Schimke.*

Guidelines reflect the collective intellectual talents of a broad spectrum of professions including the geological sciences, engineering, business, insurance, local government planning, academia, state and federal government agencies.

As of June 30, 1999, 40 Official Seismic Hazard Zone Maps have been released. These maps cover parts of Los Angeles, Orange, San Francisco, and Ventura counties. Each map covers an area of approximately 60 square miles. Prior to the release of the Official maps, a Preliminary set of maps was released for public review.

The SMGB's Geohazards Committee conducts public hearings within the affected local jurisdictions to receive technical comments on the maps. These comments are reviewed by the Committee, and then forwarded to the State Geologist for consideration in preparing the final set of Official Maps.

This mapping program originally was funded by the Earthquake Insurance Fund, and from a portion of construction building permit fees. In the early 1990s, funding for the program was greatly reduced when an economic recession slowed construction statewide and the Earthquake Insurance Fund was cancelled. The Department of Conservation was able to continue the program with federal hazard mitigation funds provided by the Federal Emergency Management Agency through the Governor's Office of Emergency Services. These funds will provide for 38 official seismic hazard zone maps of Southern California counties that were affected by the 1994 Northridge earthquake.

Jurisdictions (cities and counties) affected by Seismic Hazard Zone Maps are listed below.

Additional hazard mapping continues in the counties of Alameda, Los Angeles, Orange, San Francisco, Santa Clara, and Ventura.

COUNTIES
Los Angeles
Orange
San Francisco
Ventura

CITIES
Agoura Hills
Anaheim
Arcadia
Artesia
Azusa
Baldwin Park
Bell
Bell Gardens
Bellflower
Beverly Hills
Brea
Buena Park
Burbank
Calabasas
Carson
Cerritos
Commerce
Compton
Costa Mesa
Covina
Cudahy
Culver City
Cypress
Diamond Bar
Downey
Duarte
El Monte
El Segundo
Fountain Valley
Fullerton
Garden Grove
Gardena
Glendale
Glendora
Hawaiian Gardens
Hermosa Beach
Hidden Hills
Huntington Beach
Huntington Park
Industry
Inglewood
Irvine
Irwindale
La Canada-Flintridge
La Habra
La Habra Heights
La Mirada
La Palma
La Puente
La Verne
Laguna Beach
Lakewood
Lomita
Long Beach
Los Alamitos
Los Angeles
Lynwood
Malibu
Manhattan Beach
Maywood
Monrovia
Montebello
Monterey Park
Moorpark
Newport Beach
Norwalk
Orange
Palos Verdes Estates
Paramount
Pasadena
Pico Rivera
Placentia
Pomona
Rancho Palos Verdes
Redondo Beach
Rolling Hills
Rolling Hills Estates
Rosemead
San Dimas
San Fernando
San Francisco
San Gabriel
San Marino
Santa Ana
Santa Clarita
Santa Monica
Seal Beach
Sierra Madra
Signal Hill
Simi Valley
South El Monte
South Gate
South Pasadena
Stanton
Temple City
Torrance
Tustin
Vernon
Villa Park
Walnut
West Covina
West Hollywood
Westminster
Whittier
Yorba Linda

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MAJOR ACTIONS PURSUANT TO THE LANDSLIDE HAZARD IDENTIFICATION ACT

The Landslide Hazard Identification Act (LHIA) became effective on January 1, 1984 (Chapter 997, Statutes of 1983). The Act naturally expired through a sunset clause on January 1, 1995 (AB 2903, Chapter 394, 1988 Statutes).

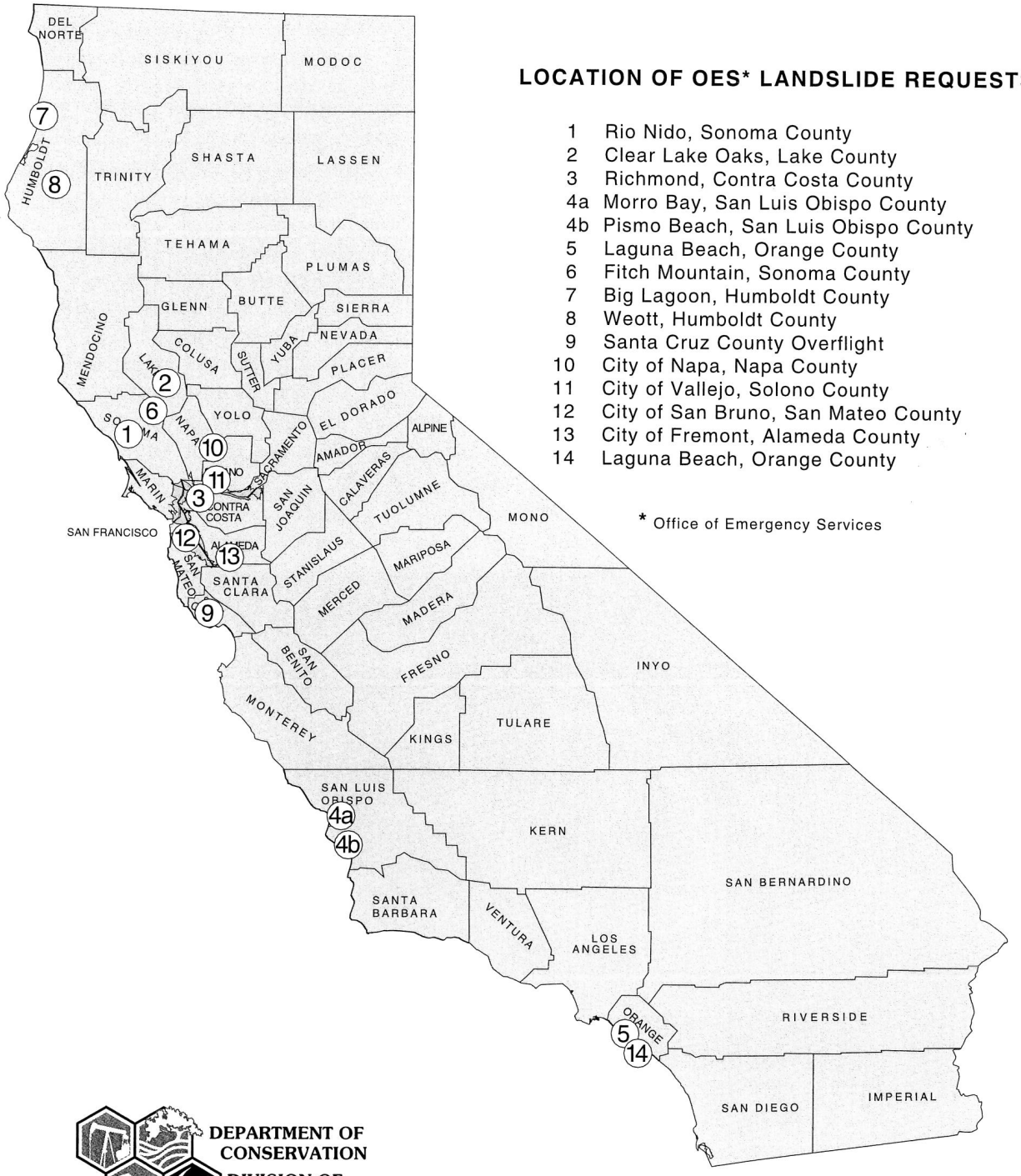
This Act formally recognized the problem of unstable slope hazards (landslides, mudslides, debris flows, slumps, soil creep, etc.) that occur throughout much of California. These unstable geologic conditions frequently are underscored by tragic loss of life and property following wet winter seasons in areas where 100% or more of annual rainfall is experienced.

LHIA provided for a state and local cooperative mapping program to identify landslide-prone areas that were targets of urbanization activities. The Act required the Director of the DOC to establish within the Division of Mines and Geology (DMG) a Landslide Hazard Identification program that was charged with mapping landslide hazard areas within urban and urbanizing locations of the state.

La Conchita landslide, Ventura County. The known-to-be-active landslide buried six homes and destroyed three others on March 4, 1995. Because the community had been notified of the potential failure and the county had implemented an emergency response plan, no lives were lost. *Photo courtesy of Chris McCullough, California Department of Conservation, Division of Oil, Gas, and Geothermal Resources.*

CALIFORNIA DEPARTMENT OF CONSERVATION

Landslide Response Efforts, 1998 Storms



LOCATION OF OES* LANDSLIDE REQUESTS

1 Rio Nido, Sonoma County
2 Clear Lake Oaks, Lake County
3 Richmond, Contra Costa County
4a Morro Bay, San Luis Obispo County
4b Pismo Beach, San Luis Obispo County
5 Laguna Beach, Orange County
6 Fitch Mountain, Sonoma County
7 Big Lagoon, Humboldt County
8 Weott, Humboldt County
9 Santa Cruz County Overflight
10 City of Napa, Napa County
11 City of Vallejo, Solono County
12 City of San Bruno, San Mateo County
13 City of Fremont, Alameda County
14 Laguna Beach, Orange County

* Office of Emergency Services

DEPARTMENT OF CONSERVATION
DIVISION OF MINES AND GEOLOGY

The SMGB, in cooperation with the State Geologist, developed mapping guidelines for the the DMG to follow, and a priority list of selected areas to be mapped. These guidelines were developed through the SMGB's Geohazards Committee.

At the conclusion of the mapping program in December, 1994, Landslide Hazard Identification Maps covering approximately 3,600 square miles of geologically unstable areas in and around urbanized settings had been produced by DMG geologists.

Note: Additional information on the LHIA program and California landslides is contained in the September-October 1993 issue of CALIFORNIA GEOLOGY MAGAZINE, published by the Division of Mines and Geology.

Cabins damaged and destroyed by the massive Mill Creek landslide on January 24, 1997. *Photo by Mark Reid.*

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OBSERVATIONS AND RECOMMENDATIONS

Surface Mining and Reclamation Act

Adequacy of Reclamation Plans: Current SMARA provides that a lead agency submit a reclamation plan supplied by an applicant mine operator to the Department of Conservation (DOC) for technical review and comment. DOC's comments as to the adequacy of the proposed reclamation plan in meeting the minimum requirements of SMARA are returned to the lead agency, which may or may not incorporate the DOC's comments into the proposed plan [ref. PRC § 2774(c)]. According to the DOC, this process has resulted in lead agency approval of reclamation plans that vary widely in their comprehensive approach to mine reclamation, and that in some cases are wholly inadequate in that they do not meet the minimum state reclamation standards required by SMARA and the SMGB's regulations. Current SMARA provides no explicit authority for the DOC to ensure the incorporation of minimum state performance standards into a reclamation plan prior to its adoption, short of filing a lawsuit in the courts or appealing already locally approved reclamation plans to the SMGB under PRC § 2770. These enforcement paths are always "after-the-fact" actions that are very costly to all parties, time consuming, and lead to acrimonious relationships between state and local agencies.

Although the SMGB recognizes that California has a diverse geography and geology, and that mine operations and techniques of necessity vary from one site to the next, none of these factors should enter into the equation of having a site specific reclamation plan that adequately meets minimum state standards.

The SMGB recommends that a method be developed to incorporate the DOC's technical review comments that are limited to the requirements of PRC Sections 2772, 2773 and 2773.1 and the SMGB's reclamation requirements into the plan prior to local lead agency approval. An applicant operator who believes that DOC's review comments are not applicable or are inappropriate to the situation, and who is unable to resolve this difference with DOC, should be entitled to appeal to the SMGB for resolution early in the process. In this manner, reclamation plans submitted to a lead agency arrive already in accordance with minimum state standards. A lead agency retains the option of incorporating additional and more stringent reclamation requirements if it desires, and retains all permitting authority. This practice would ensure that there is a consistency in the adequacy of new reclamation plans throughout the state, thus providing for the universal application of minimum state reclamation standards, removing the burden from local lead agencies that do not have the technical expertise to properly evaluate proposed reclamation plans and practices, and require all new surface mine operators to meet the same minimum standards for consistency.

Appeal of Enforcement Orders: Current SMARA provides that any order for correction or cessation of a surface mining operation issued by the Director of DOC first must be reviewed in a public hearing by the SMGB before the order becomes effective [ref. PRC § 2774.1]. SMARA also imposes a minimum 30-day waiting period between the issuance of the Director's compliance order and the scheduling of the public SMGB hearing. This current process leads to unnecessary "bureaucratic" delay in the implementation of the order, and places the Director in the position of getting the SMGB's prior approval of an admin-

istrative order before the order can become effective.

It is the SMGB's contention that it serves a most important and useful role as an impartial quasijudicial appellate body, rather than an adjudicator of the evidence supporting the issuance of an administrative order before the order becomes effective, and before the recipient of the order indicates a grievance.

The SMGB recommends that administrative orders issued by the Director become effective upon issuance, and that following issuance, an aggrieved surface mine operator may then appeal the Director's order to the SMGB.

Assumption of Lead Agency SMARA Authority by the SMGB: Current SMARA provides that a local lead agency is the primary enforcer of the Act. When a lead agency does not enforce the Act, the only sanction that may be imposed against the errant lead agency is the assumption of the lead agency's SMARA authority by the SMGB for a minimum period of three years [ref. PRC § 2774.4]. The process of assumption, in practical terms, may take a minimum of six months to complete.

When an individual surface mine operator is in violation of SMARA, and the lead agency does not enforce against that operator, the DOC is required by statute to carry out enforcement. Narrowly construed, the lead agency's failure to enforce against an operator is a failure of the lead agency to perform its primary responsibility to enforce SMARA, and therefore the SMGB could act to assume the lead agency's SMARA authority. However, assumption of local authority is a draconian action, and in the past the SMGB has been reluctant to act against a lead agency unless there has been a general failure of the lead agency to enforce the requirements of SMARA throughout its jurisdiction.

The SMGB recommends that, in addition to the present action allowing the SMGB to assume a lead agency's SMARA authority for a period of three years, that there also be lesser enforcement options available to the SMGB. Under current SMARA provisions, the SMGB has the authority to assume lead agency authority for review and approval of new reclamation plans when the SMGB declares a lead agency's surface mining ordinance deficient, or when a lead agency does not have a surface mining ordinance.

The SMGB also recommends that the timelines for taking actions against a lead agency be left to the discretion of the SMGB, rather than mandated in statute. In this way, the SMGB may determine the appropriateness of time necessary to effect required changes in lead agency actions and processes, taking into account limitations that a lead agency may have and the extent of the failures to be corrected.

Mineral Resource Management Policies: Current SMARA provides that a city or county, upon receipt of a mineral land Classification report prepared by the State Geologist or mineral land Designation report from the SMGB, must prepare and incorporate into its General Plan Mineral Resource Management Policies (MRMP). The MRMP must be submitted to and reviewed by the SMGB for comment before adoption by the city or county [ref. PRC § 2762].

Although the SMGB has developed regulations describing the content and requirements of the MRMP in accordance with its statutory mandate to do so, the SMGB has no authority to enforce inclusion of the Act's requirements into the MRMP adopted by a city or county. Cities and counties are not required to accept the SMGB's review comments; therefore, a MRMP may be locally adopted that does not adequately meet the Act's minimum requirements.

The SMGB recommends that prior to a city's or county's adopted MRMP becoming effective, it must be certified by the SMGB as being in accordance with the Act and the SMGB's regulations. This is similar to the current requirement that the SMGB certify a lead agency's SMARA ordinance as being in accordance with SMARA's requirements prior to the ordinance taking effect.

Review of Lead Agency Report on Designated Mineral Lands by SMGB: Current SMARA requires that, prior to permitting a use that would threaten the potential to extract minerals in an area designated by the SMGB as having regional or statewide significance, the city or county shall prepare a statement specifying its reasons for permitting the proposed use. The city or county must consider its MRMP, must balance the designated mineral values against alternative land uses, and consider the importance of these minerals to their market region as a whole and not just their importance to the city's or county's area of jurisdiction [ref. PRC § 2763].

Although the SMGB concurs with the practice of allowing a city or county to determine its own land use activities, the SMGB also notes that current SMARA places the city or county in the awkward, and conflicting, position of having to determine if its well being is less important than that of the surrounding jurisdictions. This is particularly manifested by the fact that a city or county is required to prepare and approve its own statement that "objectively" analyzes the merits and economics of permitting a development on a mineral resource within its own jurisdiction, or of preserving access to that mineral resource so as to benefit surrounding communities, to which the city's or county's elected officials owe no allegiance.

Designation by the SMGB of a mineral resource as having regional or statewide significance is based on extensive geological analysis and demand evaluations by the Division of Mines and Geology and the SMGB. Prior to a city or county making a determination to develop over a Designated mineral resource determined by the state as having importance, it would seem prudent to have the SMGB review and approve the locally developed statement and analysis for its adequacy in competently addressing the issues specified in the Act.

The SMGB recommends that, prior to a city or county permitting a use that would threaten the extraction of minerals from an area designated by the SMGB as having regional or statewide significance, that a method be developed to allow the SMGB to approve the city's or county's statement (analysis) as being prepared in accordance with the issues specified in the Act.

District Committees: Current SMARA provides that the SMGB may establish District Committees throughout the state as technical advisory groups [ref. PRC § 2740]. The SMGB has not found it necessary to establish technical committees on a district basis.

The SMGB recommends that the establishment of District Committees as provided in SMARA be amended to allow the SMGB to establish technical committees without regard to geographic districts to assist the SMGB in carrying out the provisions of SMARA. Under the Seismic Hazards Mapping Act the SMGB is provided authority to establish a technical advisory committee without regard to artificial districts within the state.

Abandoned Mine—Definition: Current SMARA does not include an explicit definition of an "Abandoned Mine"; current SMARA only indicates in § 2770(h)(6) that if a surface mine remains Idle (as defined) for more than one year without an approved Interim Management Plan, then it shall be considered "abandoned" and shall commence and complete reclamation according to the approved reclamation plan. Some post-SMARA abandoned mines do not have a reclamation plan or financial assurances. SMARA § 2796 contains a definition of "abandoned mine"; however, this section of SMARA is inoperative. If a lead agency or the DOC is to enforce the reclamation of post-SMARA abandoned surface mines, then a clear definition of when a mine is to be considered abandoned is required.

The SMGB recommends that an operating definition of "Abandoned Mine" be established.

Obsolete Sections—Remove: Current SMARA contains statutes that require actions by the DOC, a lead agency, or surface mine operator be performed by specific dates. These dates are long past, and the sections have become obsolete. These sections are: § 2770(b)(c)(d) and (i); and, § 2774.6. The SMGB recommends these sections

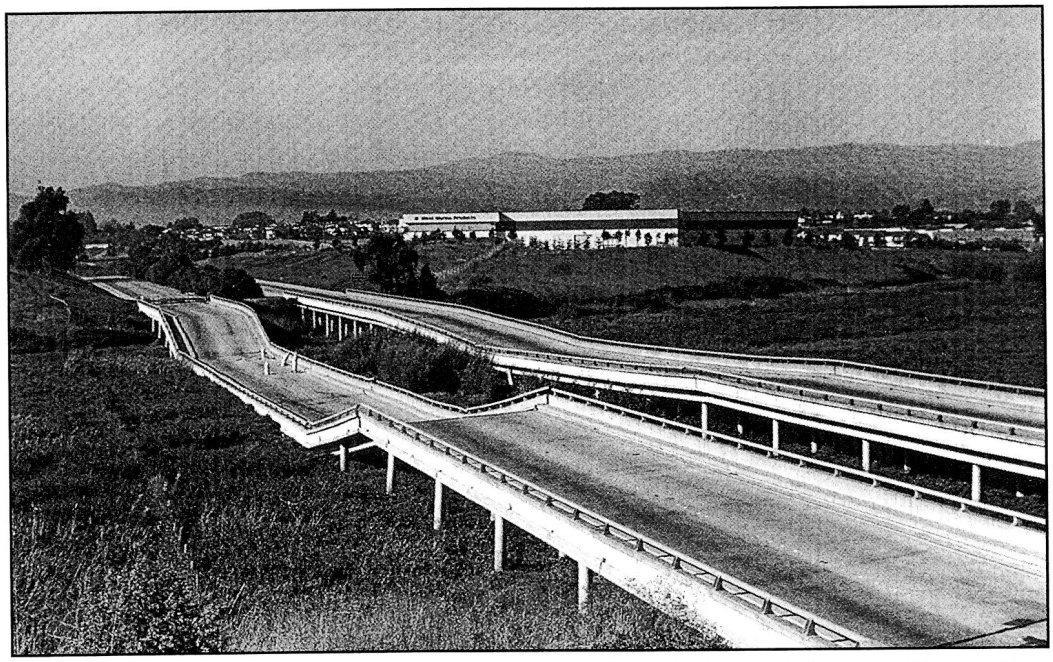
be removed from SMARA as they are no longer applicable.

Alquist-Priolo Earthquake Fault Zoning Act

This act became effective on March 7, 1973. Since that time it has been amended 11 times by the Legislature. The SMGB finds that implementing the requirements of this Act continues to provide for the health and safety of the public from losses that would be incurred by the construction of structures for human habitation across the surface traces of known active faults.

Seismic Hazards Mapping Act

This act became effective on April 1, 1991. The SMGB finds that implementing the requirements of this Act continues to provide for the health and safety of the public from losses that would be incurred by the effects of strong ground shaking, liquefaction or other ground failure, landslides, and other seismic hazards caused by earthquakes. Past funding for this program has been erratic, and in some cases, unreliable. The SMGB recommends that a steady funding source be established for the continuance of this program.



Collapsed portion of State Highway 101 over Struve Slough, Pajaro Valley, near Watsonville, Santa Cruz County. Damage was caused by strong ground shaking and liquefaction of river deposits during the Loma Prieta earthquake. *Photo by David Montgomery.*

Twenty mule team.

Graphic design by Peggy Walker
Department of Conservation
Division of Mines and Geology